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UNIVERSITE PARIS I PANTHÉON SORBONNE
ED de 465

Laboratoire de rattachement : Centre d'Economie de la Sorbonne

THÈSE

Pour l'obtention du titre de Docteur en Sciences économiques

Présenté(e) et soutenu(e) publiquement
le 13 OCTOBRE 2023 par

Musa NXELE

Titre de la thèse

**L'économie politique de la protection de l'investissement en
capital et de la promotion de la transformation inclusive
dans l'industrie minière sud-africaine**

Sous la co-direction de :

Rémi BAZILLIER	Brian LEVY
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Membre du Jury :

Kunal SEN	Professeur des Universités L'Université de Manchester (Président et Rapporteur)
Alan GELB	Chercheur principal Centre pour le Développement Global (Rapporteur)
Ishac DIWAN	Director of Research Finance for Development Lab

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THESIS

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Title of the thesis

**The political economics of safeguarding capital investment
and fostering inclusive transformation in South African
mining**

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Résumé

Ce doctorat étudie l'impératif de transformation raciale de l'économie sud-africaine de manière à stimuler la croissance des investissements en capital qui sont socialement et localement inclusifs. La première partie explore le rôle des accords entre élites ("deals") dans la facilitation de l'investissement. Elle étudie les accords en tant que base d'un engagement crédible et en tant qu'"arène d'action" dans le contexte d'un État de droit relativement solide. Quels types d'accords produisent des investissements en capital et des transformations, et quels types d'accords produisent de la prédation et de l'isomorphisme ? En utilisant la méthodologie du suivi des processus, la recherche retrace les transactions dans l'exploitation minière du platine entre 1994 et 2018. La partie II examine dans quelle mesure cet investissement est socialement inclusif en réduisant la pauvreté locale et en créant des emplois locaux. Cette partie s'appuie sur des données de recensement au niveau individuel de 20 millions d'observations et sur des données géocodées de plus de 400 mines pour évaluer l'impact local des investissements miniers sur la pauvreté monétaire et l'emploi entre 1996 et 2011.

L'étude conclut de manière convaincante que "les accords sont la base d'un engagement crédible" pour garantir l'investissement. L'État de droit est important mais insuffisant car il laisse une "incertitude résiduelle" aux investisseurs. L'évaluation de l'impact des investissements miniers sur les communautés locales suggère une qualification, au niveau local, de l'hypothèse de la "malédiction des ressources". L'exploitation minière semble apporter des avantages en termes de réduction de la pauvreté et d'emploi. Cependant, les cycles de hausse et de baisse des prix des matières premières créent de l'emploi. Les investissements miniers impliquent intrinsèquement des compromis qui peuvent être orientés vers des directions positives nettes grâce à de bons accords entre les entreprises, l'État et les communautés locales. La recherche contribue ainsi à la littérature sur les droits de propriété et l'investissement, les relations entre l'État et les entreprises et le développement, et la gouvernance des ressources naturelles pour le développement.

Mots-clés

Accords, règles, engagement crédible, transformation, investissement, pauvreté, emploi, relations entre l'État et les entreprises, gouvernance des ressources naturelles.

Summary

This PhD studies the imperative of racially transforming South Africa's economy in a way that spurs the growth of capital investment that is socially and locally inclusive. Part I explores the role of bargains among elites ("deals") in facilitating investment. It studies deals as the basis of credible commitment and as the "arena of action" in the context of a relatively robust rule of law. What kind of deals produce capital investment and transformation, and what kind of deals produce predation and isomorphism? Using process tracing methodology, the research traces deals in platinum mining between 1994 and 2018. Part II examines the extent to which this investment is socially inclusive in alleviating local poverty and creating local employment. This part relies on individual level census data of 20 million observations and geocoded mining data of over 400 mines to evaluate the local impact of mining investments on income poverty and employment between 1996 and 2011.

The study finds compelling findings that "deals are the basis of credible commitment" to securing investment. The rule of law is important but insufficient as it leaves "residual uncertainty" for investors. The evaluation of the impact of mining investments on local communities suggests a qualification, at the local level, of the "resource curse" hypothesis. Mining seemingly brings benefits in terms of income poverty alleviation and employment. However, the high-low cycles of commodity price booms create employment. Mining investments inherently involve trade-offs that can be moved in net positive directions with good deals between business and the state, and local communities. The research thus contributes to the literature on property rights and investment, state-business relations and development, and natural resource governance for development.

Keywords

Deals, rules, credible commitment, transformation, investment, poverty, employment, state-business relations, natural resource governance

À mes parents :
mon père fidèle et intègre,
Joachim Mfaniseni Nxele (1946-2021)
et
ma mère aimante et résiliente,
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Pour la joie. Pour la gloire. Pour le plaisir.

Résumé de la structure de la thèse, contributions et résultats

La question de recherche générale est la suivante : (comment) peut-on concilier la transformation de la classe raciale avec la croissance de l'investissement en capital inclusif ?

La première partie (chapitre 1 à chapitre 11) de la question de recherche générale examine comment la transformation de l'élite et de l'investissement en capital (c'est-à-dire la création et l'expansion des mines) peuvent être conciliés dans le secteur minier. La transformation de la classe raciale est une base importante du règlement politique de 1994 en Afrique du Sud, codée dans des lois et des politiques telles que la Loi sur l'autonomisation économique des Noirs et la Loi sur le développement des ressources minérales et pétrolières. La première partie évalue les efforts visant à stimuler l'investissement en capital par le biais de processus interconnectés ou co-dépendants avec la création d'une nouvelle classe capitaliste noire. La question est explorée à l'aide de trois études de cas comparatives, chacune ancrée dans une entreprise minière en exercice.

Plus précisément, la première partie de la question de recherche met en évidence un problème de transformation de la classe élite en tant que processus créant un problème d'expropriation, car il altère la sécurité des droits de propriété. Plus largement, il crée un ensemble de règles qui engendrent de l'incertitude dans le secteur privé, rendant ainsi l'investisseur incertain quant à la sécurité de l'investissement, étant donné l'itération ambiguë et fréquente des règles par l'État afin d'effectuer la transformation de la classe raciale. Le risque d'expropriation est plus prononcé dans le secteur minier en raison de la loi minière qui a nationalisé les droits miniers en 2004. L'État a commencé à exiger des compagnies minières en place qu'elles transfèrent une part de leur propriété à des élites historiquement désavantagées.

Le problème sous-jacent du risque d'expropriation associé au projet de transformation de la classe élite produit un problème d'engagement crédible pour les entreprises ou les investisseurs. Le même gouvernement qui est suffisamment puissant pour définir et faire respecter les droits de propriété est également suffisamment puissant pour exproprier l'investissement. L'objectif d'effectuer la transformation de la classe élite nécessite la croissance de l'investissement, mais l'objectif contredit également la croissance de l'investissement en créant de l'incertitude même dans un pays doté d'un État de droit relativement robuste. (Comment) peut-on concilier la transformation de la classe élite raciale avec la croissance de l'investissement en capital ? L'étude

montre que c'est au niveau des accords (« deals ») que la transformation de la classe élite raciale et la croissance de l'investissement sont conciliées. En fait, la thèse affirme que les accords (« deals ») sont la base de l'engagement crédible.

L'étude montre qu'au contraire de l'image globale d'un faible investissement en capital dans le secteur minier lors du boom des prix des matières premières des années 2000, il existe une variation de la réussite de l'investissement au niveau des accords. Cette variation est en partie due au "spectre du capital" : avec d'un côté les capitaux patients et de l'autre les capitaux prédateurs. Les accords réussis sont ceux qui sont capables de concrétiser les engagements d'investissement en cours grâce à la coopération entre l'État et les entreprises patientes, ou la coopération entre les entreprises incumbentes patientes et les partenaires BEE patients. Les accords moins réussis ou échoués sont ceux qui sont motivés par un type de stratégie d'entreprise prédatrice favorisant la collusion ou l'isomorphisme, entraînant une faible (subsequent) investissement. Par conséquent, alors que l'image globale de la transformation de la classe élite est associée à un investissement en capital relativement faible, il existe des poches d'excellence au niveau des accords qui concilient la transformation avec l'investissement. La thèse contribue à la compréhension des raisons pour lesquelles l'échec des accords d'investissement se produit, et des raisons pour lesquelles les succès se produisent, en mettant en avant les accords comme l'arène d'action, par opposition aux règles comme le seul moyen (ou comme suffisant) d'effectuer une transformation réussie induisant l'investissement. L'étude démontre que résoudre le dilemme entre l'investissement et la transformation implique de conclure des accords de coopération entre les entreprises et le gouvernement, et des accords de coopération entre les incumbents et les partenaires BEE au niveau des actifs.

Le projet global de transformation de la classe raciale consiste en des sous-accords basés sur la classe. Alors que le sous-accord de l'élite était basé sur le changement de la structure de propriété raciale de l'économie, l'incorporation des non-élites était envisagée grâce à la fourniture publique de services, et dans le cas de l'exploitation minière, grâce à la création d'emplois et à des pratiques minières localement intégrées telles que l'approvisionnement local en biens, ainsi qu'à travers des retombées liées à l'exploitation minière qui se traduiraient par un relèvement local.

Par conséquent, la deuxième partie de la thèse (chapitre 12 à chapitre 13) évalue l'impact économique local des investissements miniers, y compris la création, l'expansion et la fermeture de mines dans les communautés minières. Dans quelle mesure les investissements miniers sont-ils économiquement inclusifs de manière à bénéficier aux communautés locales ? Cette question

est abordée comme une question d'économétrie, évaluée à l'aide d'un ensemble de données de panel construit de 19 millions d'observations individuelles sur trois vagues de recensement entre 1996 et 2011 ; des données qui incluent les revenus, le statut d'emploi et le niveau d'éducation des individus, ainsi que des variables sur les conditions sociales au niveau communautaire dans lesquelles chaque individu est situé.

Les trois vagues de données de recensement sont fusionnées avec des données minières collectées qui comprennent l'emplacement des mines, le type de matière première extraite et les prix mondiaux des matières premières. Cet ensemble de données géocodées permet d'explorer l'impact des mines dans les communautés minières sur la pauvreté et l'emploi. La deuxième partie produit des conclusions et des résultats qui abordent directement les impacts socio-économiques de l'investissement minier.

La conclusion générale de la thèse porte sur la question principale de la conciliation de l'impératif de transformation de la classe raciale avec l'investissement en capital inclusif.

CHAPITRE 1 Transformation de classe raciale et investissement fixe

1.1. L'objectif de la thèse, l'hypothèse et l'argument

L'Afrique du Sud est confrontée à un dilemme de développement consistant à faire croître l'économie grâce à l'investissement en capital tout en transformant simultanément la structure raciale de l'économie grâce à la politique d'Autonomisation Économique des Noirs (BEE). La transformation de classe raciale est au cœur du règlement politique de l'Afrique du Sud qui a soutenu une transition pacifique. Pour maintenir le projet de transformation de classe, un investissement fixe continu est nécessaire.

La formulation des règles pour une telle transformation est plus facile que sa réalisation. Il n'y a aucune garantie que de telles règles, (1) favorisent l'investissement, ou (2) créent des entreprises ou des entrepreneurs noirs productifs. Au contraire, un problème sous-jacent d'engagement crédible limite l'investissement. Si le gouvernement a le pouvoir de protéger un ensemble de propriétaires d'actifs, il peut également utiliser ce pouvoir pour abroger leurs droits de propriété.¹ Les détenteurs d'actifs ont besoin d'un engagement crédible, que la conformité aux règles ne peut pas fournir. Un État de droit universel solide - une caractéristique marquante du cas sud-africain - est utile, mais insuffisant. Les tribunaux peuvent statuer sur la loi et fournir des éclaircissements sur la politique, mais le gouvernement conserve le privilège de créer la politique, et la politique est sujette aux préférences et aux vicissitudes des acteurs politiques au pouvoir.

Même si les règles sont établies et suivies, il n'y a aucune garantie que le résultat sera une classe entrepreneuriale productive essentielle à un cercle vertueux de création de richesse et de croissance soutenue. Les acteurs prédateurs peuvent gérer les règles à leur avantage personnel de manière à compromettre un projet de développement programmatique. Par conséquent, le processus de transformation de l'économie et d'élargissement des opportunités grâce à l'investissement nécessite des méthodes de construction d'un engagement crédible compatible avec l'investissement et la transformation. La réussite de la transformation dirigée par l'investissement nécessite deux composantes essentielles. Premièrement, il doit y avoir une présence de capital incumbent qui partage non seulement la vision de la transformation dirigée par l'investissement, mais qui est également doté de la prévoyance nécessaire pour adopter une stratégie d'entreprise adaptative. Deuxièmement, une exigence essentielle est une élite noire qui

¹ Le doctorat utilise les termes "gouvernement" et "État" de manière interchangeable.

fait preuve de qualités de patience et de productivité, renonçant à un enrichissement personnel rapide en faveur d'un progrès plus durable et plus durable. Cette étude suit la définition du concept par Andrew (1997) :

La stratégie d'entreprise est le schéma de décisions au sein d'une entreprise qui détermine et révèle ses objectifs, ses finalités ou ses buts, élabore les principales politiques et plans pour atteindre ces objectifs, et définit le champ d'activité que l'entreprise entend poursuivre, le type d'organisation économique et humaine qu'elle est ou qu'elle a l'intention d'être, ainsi que la nature de la contribution économique et non économique qu'elle entend apporter à ses actionnaires, employés, clients et communautés.²

Cette définition saisit une partie cruciale de l'argument en cours de développement, à savoir que les grandes entreprises incumbentes ont des stratégies d'entreprise qui, avec le temps, peuvent révéler leurs préférences et leurs intérêts en ce qui concerne les questions de l'économie politique nationale, telles que le projet de transformation élitaire. En fonction de leurs stratégies d'entreprise, qui peuvent évoluer avec le temps, les entreprises peuvent décider de coopérer avec les impératifs sociaux et de développement ou agir de manière à court terme.³

1.1.1. Question de recherche et hypothèse

La question de recherche générale est : (Comment) les objectifs politiques d'augmenter l'investissement en capital et de favoriser la transformation de l'élite raciale peuvent-ils être conciliés ?

L'Afrique du Sud est confrontée à un problème d'investissement en capital faible et à une économie très inégale. La question de savoir comment stimuler davantage l'investissement semble entrer en conflit avec la politique de l'BEE, qui exige des investisseurs qu'ils concluent des accords de détention d'actions avec des entrants noirs locaux. Une réponse typique est que cette exigence décourage l'investissement et la transformation productive. La logique est la suivante. Premièrement, l'BEE constitue un obstacle à l'investissement car il est entaché du problème de l'engagement crédible. Une fois qu'un investisseur se conforme aux règles, l'État qui établit les règles peut changer ces règles, ce qui réduit la valeur pour les investisseurs.

² Pour simplifier, les termes « culture d'entreprise » et « stratégie d'entreprise » sont utilisés de manière interchangeable. Par culture d'entreprise, l'étude entend les dispositions et l'ensemble multidimensionnel de comportements qui se situent le long du spectre du capital patient-predatory (tel qu'indiqué au chapitre 2). L'analyse de la culture d'entreprise est éclairée en étudiant l'histoire des acteurs, plutôt qu'en travaillant en sens inverse à partir du résultat spécifique de transactions spécifiques (ce qui rendrait l'analyse tautologique).

³ Le fait que les stratégies d'entreprise des firmes puissent être observées grâce à une étude attentive est empiriquement exploité par ce doctorat.

Deuxièmement, l'BEE freine la transformation productive car il encourage l'auto-sélection d'individus politiquement connectés prédateurs qui abusent du programme pour s'enrichir, sans créer d'entreprises prospères compatibles avec le développement national.

Ce doctorat aborde ces arguments de deux manières importantes. Premièrement, l'Afrique du Sud a besoin à la fois d'une croissance de l'investissement en capital et de la transformation, en parallèle. Il est politiquement inviable de rejeter le projet de transformation. Il n'est pas non plus économiquement durable de renoncer à la croissance de l'investissement. La transformation est impérative pour la stabilité du règlement politique, tandis que l'investissement est vital pour la croissance économique et la viabilité du projet de transformation. Comment ces deux impératifs en apparence mutuellement exclusifs peuvent-ils se rencontrer de manière mutuellement bénéfique ? Deuxièmement, ce doctorat affirme que si l'on regarde au-delà de l'image généralement sombre d'une faible croissance de l'investissement en capital et de l'échec de la politique de transformation, on trouvera à la fois des succès et des échecs au niveau des accords. Qu'est-ce qui distinguait les accords réussis des accords échoués ? Tous les investisseurs sont confrontés aux mêmes exigences pour conclure des accords d'BEE avec les risques qui y sont liés, et la stratégie des investisseurs consistant à coopter des entrants politiquement connectés dans les accords d'BEE est omniprésente, mais certains accords ont prospéré de manière compatible avec l'investissement, tandis que d'autres n'ont pas réussi à attirer ou à soutenir un investissement ultérieur. Ce doctorat soutient qu'il existe des différences dans les accords : certains peuvent garantir un engagement crédible tandis que d'autres n'ont pas réussi à se stabiliser ou à être crédibles.

En prenant le cas particulier de l'économie sud-africaine largement dominée par les oligopoles dans les années 1990 comme point de départ, l'hypothèse explorée est que la base de l'engagement crédible est finalement un accord. À son tour, l'investissement est le plus élevé et le plus durable lorsque deux conditions ou niveaux d'accords sont conclus par le capital en place.

(1) il existe un accord tangible et constamment réaffirmé de coopération mutuelle sur la transformation plutôt que de prédation entre le capital en place et l'élite politique au pouvoir ou le parti ou le gouvernement.

(2) il existe un partenariat durable et patient qui garantit un engagement crédible au niveau de l'entreprise ou de l'actif ; correspondant à cela, l'investissement est plus faible lorsque l'accord est conclu avec un partenaire prédateur.

Une préoccupation en Afrique du Sud pour obtenir des règles correctes a conduit à l'incertitude quant aux règles, ce qui a sapé l'investissement et la croissance (Levy, Hirsch, Naidoo, et Nxele, 2021).⁴ Dans le contexte de l'BEE, obtenir les bons accords plutôt que les bonnes règles favorise l'investissement.

Empiriquement, il existe différentes approches de l'impératif de transformation de l'élite. Ces approches vont de la capitalisation à long terme et patiente d'un côté, à la capitalisation prédatrice de l'autre côté. Cette variation du capital (c'est-à-dire le spectre du capital patient-prédateur) se manifeste empiriquement dans des poches d'investissement et de transformation d'un côté, et de prédation et de démantèlement d'actifs de l'autre côté. Cette analyse des résultats de l'investissement et de la transformation au cours des trois dernières décennies en Afrique du Sud contribue à la connaissance des processus qui concilient l'allocation raciale des rentes avec la croissance de l'investissement, et des processus qui conduisent à une incertitude endémique.

La question de recherche et l'hypothèse sont encadrées dans la littérature sur l'économie politique des relations entre l'État et les entreprises dans les pays en développement, ainsi que dans la littérature sur les règlements politiques, l'économie institutionnelle ou l'économie des transactions, et les déterminants politiques de l'investissement. La question et l'hypothèse ont déterminé la portée et les paramètres du projet. La première partie du doctorat examine le rôle des accords ou des "marchandages d'élite" entre la direction économique et politique en Afrique du Sud dans le contexte de la transformation de l'élite. Le doctorat n'explore pas d'autres déterminants de l'investissement ou n'évalue pas le règlement politique plus large de l'Afrique du Sud, y compris le rôle d'acteurs puissants tels que les syndicats ou la société civile. Il n'examine pas non plus la politique industrielle de l'Afrique du Sud ou les accords d'BEE sous des dimensions alternatives telles que les structures de financement. L'étude est ancrée dans l'arène d'action des accords de détention d'actions d'BEE en ce qui concerne leur rôle dans la stimulation de l'investissement et de la transformation d'une part, et la recherche de rentes collusives et les échecs d'autre part. L'étude n'examine pas les éléments de politique plus larges de l'BEE.

1.1.2. Contexte et étude de cas

Pour plus de clarté, cette étude adopte un cadre hiérarchique qui englobe progressivement des niveaux de détail de plus en plus fins, allant du niveau méga global au niveau nano intriqué. Le

⁴ Tenter de couvrir toutes les éventualités avec une règle est une entreprise à coût de transaction très élevé.

niveau méga aborde des préoccupations universelles qui concernent toutes les nations, telles que l'impératif de favoriser la croissance de l'investissement en capital. En passant au niveau macro, l'attention se concentre sur des questions propres à chaque pays, comme le paysage politique distinct de l'Afrique du Sud, le cadre politique de l'BEE et la structure économique unique. Le niveau méso se concentre sur des dynamiques spécifiques aux secteurs, impliquant des industries telles que l'exploitation minière ou, plus spécifiquement, le secteur de l'exploitation du platine. En passant au niveau micro, l'analyse se déplace vers les interactions organisationnelles, englobant les négociations entre les entreprises et même les entités gouvernementales, appelées accords de niveau entreprise-politique dans cette étude. Enfin, le niveau nano se penche sur les intrications spécifiques aux actifs, représentant la couche d'examen la plus granulaire, notamment les accords de niveau actif tels qu'ils sont définis dans cette étude. La Figure 1 ci-dessous présente ce cadre de manière visuelle. Elle montre les différents niveaux et les chevauchements entre les niveaux. Le reste de ce chapitre et du suivant utilise cette organisation pour la cohérence et la clarté.

Figure 1 - Cadre pour les sujets, de plus en plus spécifiques



Source : Auteur

La performance de l'investissement en capital et la transformation de l'élite sont des impératifs globaux communs à tous les pays - ce sont des préoccupations de niveau méga. Du point de vue de l'étude de cas, l'expérience de l'Afrique du Sud à ce niveau se caractérise par une déficience prolongée de l'investissement en capital sur trois décennies de démocratie, accompagnée d'un

taux de croissance économique moyen modeste de 2,42 % par an entre 1994 et 2021 (World Bank, 2021). De plus, en 2022, l'Afrique du Sud était classée comme le pays le plus inégal au monde (World Bank, 2022).

L'Afrique du Sud est également un pays à revenu intermédiaire supérieur, avec un système juridique universel relativement robuste et de bons mécanismes de contrôle et d'équilibre (Levy, Hirsch & Woolard, 2014). C'est une démocratie multipartite gouvernée par un parti politique dominant, le Congrès national africain (ANC), depuis trois décennies (Hirsch & Levy, 2018). L'ANC est de plus en plus fragmenté, rongé par des luttes factionnelles correspondant à des différences d'idéologie, de relations avec les entreprises et les droits de propriété (c'est-à-dire des relations de coopération versus collusion), et des fractures entre les initiés et les intérêts développementaux par rapport aux initiés et aux intérêts prédateurs (Levy, Hirsch, Naidoo, et Nxele, 2021). Le problème de l'engagement crédible découle de l'incertitude politique et bureaucratique résiduelle, malgré la robustesse de l'État de droit.

En descendant au niveau méso, l'hypothèse utilise le secteur minier comme étude de cas, car il a été la première et la plus grande cible d'accumulation pour la transformation de l'élite (Theobald et al., 2015). Le doctorat isole l'industrie de l'extraction du platine, qui a servi de nouvelle source d'expansion de l'investissement et d'accumulation de rentes entre 1994 et 2018.⁵ L'extraction du platine est une industrie en pleine croissance en Afrique du Sud, par rapport aux industries minières de l'or, du diamant et du charbon vieillissantes et en déclin. En choisissant une seule industrie, l'étude parvient à contrôler les facteurs spécifiques à l'industrie et au type de matière première. Dans l'industrie de l'extraction du platine, quatre grandes entreprises minières détiennent 90 % de la production : Anglo American Platinum (Amplats), Impala Platinum (Implats), Lonmin et Northam. Plusieurs petites entreprises minières partagent les 10 % restants. Cette étude fournira un aperçu de l'ensemble du complexe minier du platine au chapitre 4. Ensuite, elle explorera l'hypothèse à l'aide des études de cas d'Amplats et de Lonmin. Ensemble, ces deux entreprises représentent environ 65 % de l'extraction du platine au cours de la période étudiée. L'étude montrera également que ces entreprises présentent suffisamment de variations dans leurs stratégies d'entreprise, leurs accords, leurs investissements et leur transformation pour fournir une plateforme analytique pour explorer les hypothèses de la Partie I.⁶

⁵ La période étudiée s'étend de 1994 à 2018. Cependant, la recherche fera référence et discutera des détails post-2018 pour maintenir l'étude aussi à jour que possible, à proximité de l'année 2022 (moment de l'achèvement de ce projet).

⁶ La thèse complète incluait Northam. Cependant, en raison des contraintes de nombre de mots, cette étude de cas a été réservée comme une sortie post-doctorale.

L'étude examine plus en détail l'image globale selon laquelle l'Afrique du Sud a un faible investissement en capital (Fedderke, 2009) pour examiner les variations de la performance de l'investissement en capital au niveau de l'entreprise et au niveau de l'accord. Chaque entreprise a traité différemment le problème de l'engagement crédible, a élaboré des accords de légitimation différents avec le gouvernement, aux côtés d'associations variées avec divers partenaires de l'BEE. Cette variation d'approches conduit ensuite à des résultats d'investissement et de transformation disparates, observés au niveau de l'analyse des accords (niveaux micro et nano). Par conséquent, en ce qui concerne les unités d'analyse, deux entreprises incumbentes (I-firms ou I-partners) sont étudiées : Amplats et Lonmin dans les Sections B et C respectivement, et Amplats/Communities dans la Section D. Ces I-firms manifestent des différences dans leurs stratégies d'entreprise, oscillant le long d'un spectre qui va de la patience à la prédation - le "spectre patience-prédation". Ces distinctions s'étendent aux accords qu'ils concluent avec le gouvernement et les partenaires de l'BEE. On postule que le gouvernement, tout en étant engagé envers la transformation, présente une fragmentation qui engendre des accords transformateurs avec certaines I-firms et des arrangements collusifs avec d'autres.⁷ Notamment, les frontières entre le gouvernement et le parti au pouvoir sont fréquemment floues, d'où l'utilisation interchangeable des termes. Le deuxième groupe de cas concerne les partenaires de l'BEE (désignés sous le nom d'E-firms ou E-partners), qui sont cooptés par chaque entreprise incumbente.

Les partenaires de l'BEE présentent également un éventail de stratégies d'entreprise, allant de la patience à la prédation. Étant donné que chaque entreprise incumbente conclut plusieurs accords pour répondre aux exigences de l'BEE, plusieurs acteurs de l'BEE interviennent dans chacune des deux études de cas d'entreprises incumbentes. Pour chaque entreprise incumbente, il y a deux chapitres. Le premier chapitre propose un récit historique analytique de l'entreprise incumbente et d'un partenaire de l'BEE prominent. Son objectif est de mettre en évidence la caractéristique et la stratégie d'entreprise à la fois de l'entreprise incumbente et de son partenaire de l'BEE le plus en vue. Le deuxième chapitre se penche ensuite sur tous les accords conclus par l'entreprise incumbente : d'abord l'accord avec le gouvernement qui fournit un accord global de coopération, puis les accords avec différents partenaires de l'BEE. Ces études de cas sont résumées dans le

⁷ En d'autres termes, le gouvernement a deux visages. Il existe des individus ou des groupes G-patients et G-prédateurs au sein du gouvernement, en fonction de la personne ou du groupe auquel vous avez accès au sein du gouvernement.

Tableau 1, en notant que la Partie I du doctorat est structurée en fonction des entreprises incumbentes.

Tableau 1 - Études de cas sur l'extraction du platine

Section in PhD	I-firm (des entreprises incumbentes)	Type de capital de l'entreprise incumbente (résultat)	E-firm and type of capital
Section B	Amplats (Anglo) 1. Quel type de capital est Amplats et comment l'histoire de ses stratégies d'entreprise révèle-t-elle ce caractère ? 2. Gestion du risque d'expropriation : Étude empirique des accords d'Amplats et évaluation des résultats en matière d'investissement et de transformation.	Patient	African Rainbow Minerals (patient), Pelawan (prédateur), Khumama (prédateur)
Section C	Lonmin (Lonrho) 1. Quel type de capital représente Lonmin et comment son histoire en matière de stratégies d'entreprise révèle-t-elle ce caractère ? 2. Gestion du risque d'expropriation : Étude empirique des accords de Lonmin et évaluation des résultats en matière d'investissement et de transformation.	Prédateur	Incwala (extension of Lonmin), Shanduka (prédateur)
Section D	Amplats (Anglo) and Communities 1. Qui sont la communauté minière Royal Bafokeng et la communauté minière Bakgatla ba Kgafela, et quel type de leadership les préside du point de vue d'un spectre commercial/capital ? 2. Gestion du risque d'expropriation : Étude empirique des accords d'Amplats avec les Bafokeng et les Bakgatla en tant que partenaires BEE, et évaluation des résultats en matière d'investissement et de transformation.	Patient	Communautés: La direction du Royal Bafokeng (patient) La direction du Bakgatla ba Kgafela (prédateur)

Source : Auteur. Notez qu'en Section B, les accords d'Amplats avec le capital international entrant sont également étudiés.

Le Tableau 1 met en évidence un aspect crucial des partenaires de l'BEE en Afrique du Sud, notamment en ce qui concerne les terres détenues en commun. Les partenaires de l'BEE englobent les communautés minières propriétaires de terres, une caractéristique cruciale influençant les dynamiques de négociation et le paysage politique auxquels les entreprises incumbentes sont confrontées. Méthodologiquement, cette étude examine de manière exhaustive tous les accords d'BEE conclus par Amplats, notamment en incluant les leaderships de Royal Bafokeng et de Bakgatla ba Kgafela en tant que partenaires éminents contribuant à la présence et au succès d'Amplats dans la province du Nord-Ouest. Cependant, en raison de la disparité qualitative entre ces partenaires et les acteurs individuels de l'BEE, les chapitres axés sur les communautés sont positionnés après le chapitre sur Lonmin. Cette disposition stratégique renforce l'exploration comparative des stratégies de capital patience-prédation. De plus, elle place les chapitres axés sur la communauté plus près de la Partie II, qui approfondit davantage le débat en cours sur l'impact de la richesse minérale sur le développement.

L'exploitation minière est une étude de cas particulièrement utile non seulement en raison de son importance pour le développement économique historique et actuel de l'Afrique du Sud, mais aussi parce qu'il s'agit d'un cas de droits de propriété contestés dans un contexte d'investissement en capital important et irréversible. Entre 1998 et 2004, le gouvernement de l'ANC en Afrique du Sud a adopté une législation qui a enraciné l'BEE, tout en promulguant simultanément la nationalisation de la propriété des droits miniers (Capps, 2012). L'objectif était de faciliter le transfert d'un quart de la propriété des maisons minières aux élites noires (Capps & Mswana, 2015). Cette nationalisation des droits miniers a modifié le système de droits de propriété dans l'exploitation minière dans la mesure où elle a compromis la viabilité des entreprises minières incumbentes à l'époque. Ce moment historique a été la tentative de l'ANC de commencer à construire une classe d'affaires noire qui serait idéologiquement les moteurs patriotes de l'industrie (Nxele, 2022).

La nationalisation des droits miniers a cependant créé différentes formes de menaces d'expropriation dans le présent et l'avenir. Au sein de l'ANC, il y a eu un grand débat sur (et un mouvement vers) la nationalisation des actifs miniers avant sa conférence de 2012. Il y a eu plusieurs autres problèmes tels que le problème "une fois habilité, toujours habilité", d'actualité depuis 2014 lorsque le gouvernement a poussé pour de nouvelles rondes d'habilitation noire dans l'industrie pour les entreprises dont les partenaires de l'BEE avaient vendu leurs parts dans les accords. Ce départ rendrait les entreprises incumbentes non conformes, nécessitant ainsi une nouvelle dilution des actionnaires existants, ce qui aggraverait l'incertitude au sein du secteur.⁸ Dans l'ensemble, la question des variantes de l'expropriation transmises par les règles demeure une menace réelle pour les entreprises, en particulier à la lumière du défi politique persistant de l'inégalité profondément enracinée et racialement enracinée dans le secteur privé.

Les cas au niveau micro explorent comment chacune des entreprises incumbentes a géré les risques d'expropriation dans ses relations avec le gouvernement. Toutes les entreprises incumbentes étudiées ont dû s'engager avec le gouvernement tout en négociant la sécurité de la tenure de leurs propriétés. Quels types d'accords ont été conclus avec le gouvernement pour signaler la coopération et gérer le risque d'expropriation ? Enfin, les cas au niveau nano incluent des partenariats et des accords dans des mines spécifiques. Ce sont des sources de variation au sein des entreprises incumbentes et entre les partenariats de l'BEE dans l'industrie du platine. En fin de compte, les principales variables de résultat d'intérêt sont les investissements tangibles

⁸ Cette question est discutée plus en détail dans le chapitre 11.

dans le forage de puits, et la transformation tangible sous forme d'entreprises détenues par des Noirs productives.

1.2. Le problème nécessitant une transformation de l'élite en Afrique du Sud

En Afrique du Sud, la transformation de l'élite (et plus largement, la transformation des classes raciales) est impérative car la transition politique démocratique n'a pas intrinsèquement démolit l'inégalité économique profondément enracinée et racialement fondée. La propriété des secteurs stratégiques de l'économie est restée largement entre les mains de la direction économique blanche.⁹ En revanche, la direction politique est issue d'un milieu historiquement désavantagé et représente une clientèle de personnes noires historiquement opprimées, constituant environ 80 % de la population.

La présidence sud-africaine a décrit cette disparité de la manière suivante :

L'une des caractéristiques de l'Afrique du Sud ... est le fait que la direction politique au gouvernement est assez distincte en termes de race, de culture, d'origine et de mode de vie par rapport à la direction économique. Cela a eu certains avantages en ce sens que la direction politique n'est pas redevable à un "Vieux Club de Garçons" établi. L'inconvénient est que le type de confiance nécessaire entre les "élites" économiques et politiques pour des niveaux élevés d'investissement faisait défaut en Afrique du Sud après 1994 (The Presidency, 2003 : 111).

Alors que le statu quo de la propriété était une recette pour les conflits politiques ultérieurs et l'instabilité, les efforts visant à le transformer risquaient de déclencher des influences déstabilisantes. Il y avait le risque d'incertitude concernant les perspectives futures, de nature à compromettre les investissements privés (Tangri & Southall, 2008), et que, à mesure que les dirigeants politiques et leurs alliés se disputaient l'accès aux actifs économiques, l'utilisation discrétionnaire du pouvoir politique puisse devenir la norme, affaiblissant ainsi plus largement les institutions de l'État (Hirsch & Levy, 2018 : 22).

Plusieurs contributions dans la littérature suggèrent que la croissance économique crée les conditions dans lesquelles la transformation est possible sans cette "dispute pour l'accès aux actifs" de manière à compromettre les investissements (Mbeki, 2009 ; Turok, 2016 ; Jonas,

⁹ Au fil du temps, la composition de la "direction économique blanche" a changé en Afrique du Sud. Cela est dû au démantèlement de plusieurs grands conglomérats à la fin des années 1990, et à la possession croissante d'entreprises par des investisseurs institutionnels. Cette tendance contemporaine des modèles de propriété est discutée dans le chapitre 11 et incluse comme résultat de recherche post-doctorale prévu dans le chapitre 14.

2018). Cependant, la croissance économique, en elle-même, est peu susceptible de transformer l'inégalité économique raciale. Le ministre adjoint des Finances entre 2014 et 2016, Mcebisi Jonas, soutient que la croissance économique sans transformation...

...reproduira et aggravera les inégalités, ce qui rendra la croissance insoutenable. La transformation sans croissance nette de l'investissement et de la production entraînera une augmentation du chômage et de la pauvreté et, à terme, réduira la capacité de redistribution fiscale de l'État. La diminution de la richesse augmentera également les conflits au sein de l'élite, rendant la gestion du consensus plus difficile (Jonas, 2018 : 15).

Le degré d'inclusivité de la croissance économique a de l'importance, en particulier dans le cas de l'Afrique du Sud, qui est fortement inégale.

Face à l'impératif d'une implication directe de l'État pour créer une classe capitaliste noire, le gouvernement dirigé par l'ANC a initié un processus de formalisation des accords d'autonomisation en créant une politique officielle et une législation visant à développer et à gérer l'autonomisation économique des Noirs de manière programmatique (Freund, 2007 ; Levy, Hirsch, Naidoo et Nxele, 2021). Comme l'a noté Freund, l'État serait censé être développemental dans la mesure où il envisageait l'émergence d'une élite orientée vers le développement, qui « franchirait les frontières entre les rangs de la direction du secteur privé, [et] la bureaucratie établie et les politiciens » (Freund, 2007 : 663). Ainsi, l'ANC - en particulier son leader Thabo Mbeki¹⁰, qui a dirigé le projet de transformation depuis ses débuts - envisageait initialement que cette classe d'entrepreneurs noirs serait productive, complétant la poursuite par l'État de la croissance économique et du développement (IOL, 1999 ; Gumede, 2007).

Un fort soutien pour l'aspect « disciplinant » du programme de transformation a évolué vers un soutien décroissant aux éléments proactifs favorisant la compétitivité mondiale (Hirsch & Levy, 2018). Nxele (2021) a observé l'absence de logique inhérente à l'autonomisation économique des Noirs pour la création de richesse et le développement des capacités, sans aucune exigence d'alignement des entreprises productives sur une politique industrielle efficace (Sen, 2015). En revanche, le programme de transformation mettait l'accent sur les règles régissant les transferts d'équité pour les consommateurs, produisant des avantages développementaux limités.¹¹

¹⁰ Thabo Mbeki a été vice-président de l'Afrique du Sud à partir de 1994 et a été président de 1999 à 2008.

¹¹ La loi sur l'autonomisation économique des Noirs (de 2003) contient des règles qui traitent non seulement de la propriété, mais aussi de la représentation raciale à différents niveaux de direction, ainsi que d'autres règles d'action positive. L'objet de la présente étude porte principalement sur les accords entre élites : ceux-ci se concentrent principalement sur la question de la propriété, et secondairement sur la représentation au conseil d'administration.

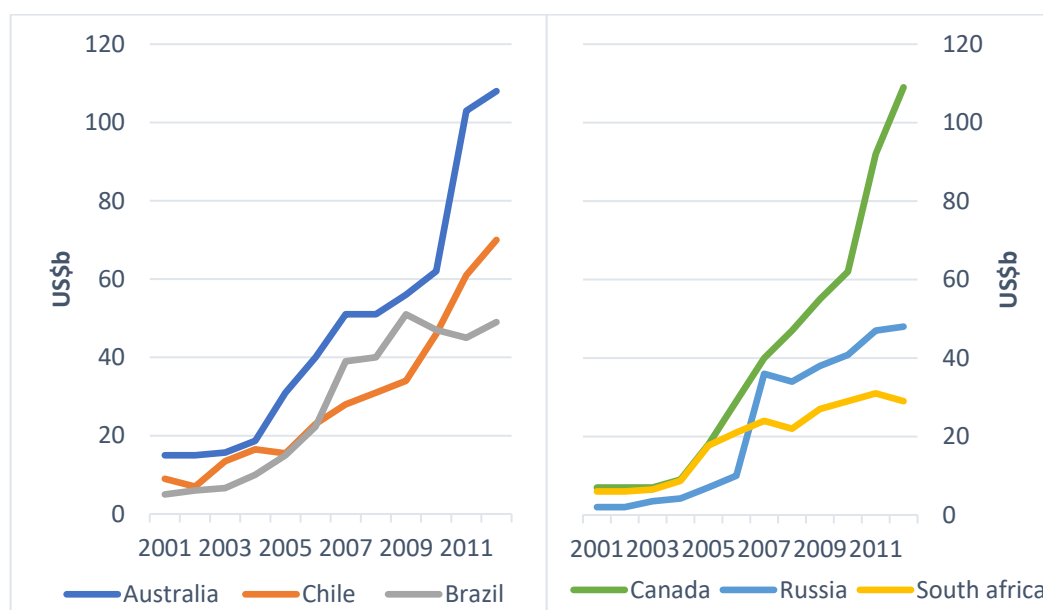
L'hypothèse était que la conformité et l'investissement continu favoriseraient une restructuration progressive, dirigée par des entreprises noires productives. En se concentrant davantage sur les règles, on espérait une transformation (Pityana, 2015). Au lieu de cela, cela a engendré de l'incertitude due à des différends entre l'économie et le gouvernement et à des changements de règles imprévisibles. Les élites internes ont encouragé des accords collusifs. Au lieu de favoriser la productivité, l'économie de l'Afrique du Sud a stagné, et des forces contre-productives ont surgi (Hirsch & Levy, 2018).

Le projet de transformation des classes raciales n'a donc pas coïncidé avec une croissance suffisamment forte de l'investissement (discutée ci-dessous), car il n'y avait pas de pacte suffisamment robuste entre l'élite politique et l'élite économique pour collaborer sur un ensemble d'initiatives mutuellement bénéfiques qui injecteraient du dynamisme et de la croissance à moyen et long terme. Cette thèse s'écarte de l'approche « plus de règles » jusqu'à présent suivie en Afrique du Sud. L'hypothèse de cette étude est que dans un tel environnement, la solution ne consiste pas seulement à élaborer davantage de règles, mais à compléter le cadre « suffisamment bon » de règles de l'Afrique du Sud en élaborant de bons accords. Cette étude montrera que de bons accords peuvent établir et maintenir un engagement crédible autour d'un ensemble d'investissements, avec de meilleures chances de créer des entreprises productives détenues par des Noirs.

1.3. L'investissement et le problème d'engagement crédible dans le secteur minier

Dans le secteur minier, l'impact économique de la transformation des élites a été évident. L'introduction de la BEE a conduit à un résultat significatif : "entre 2001 et 2008, la plus longue période de hausse des prix des matières premières de l'histoire récente, l'industrie minière de l'Afrique du Sud [PIB] a connu un taux de contraction de 1 % par an, tandis que ses concurrents les plus proches affichaient un taux de croissance moyen de 5 % par an" (Rossouw & Baxter, 2011 : 511). Ce mauvais résultat s'est produit malgré une évaluation en 2010 par Citigroup de la richesse en ressources minérales prouvées de l'Afrique du Sud à 2,5 billions de dollars, la plus grande au monde. Les pays comparables, classés par valeur minérale décroissante, sont la Russie (1,65 billion de dollars), l'Australie (1,6 billion de dollars), le Canada (1 billion de dollars), le Brésil (0,70 billion de dollars), la Chine (0,68 billion de dollars) et le Chili (0,65 billion de dollars) (Mintek & Jones, 2017).

Figure 2 - Projets d'investissement minier dans les principaux pays miniers, 2001-2012



Source: Nedbank Group Economic Unit (2017)

La figure 2 montre qu'au cours de la période de hausse des prix des matières premières entre 2001 et 2012, l'Afrique du Sud n'a pas réussi à attirer des projets d'investissement proportionnels à la taille de sa valeur minérale et à la diversité de ses ressources minérales. Cette sous-performance en matière d'investissement explique directement la contraction moyenne annuelle de la contribution de l'industrie minière au PIB.

Le processus de conversion des droits miniers de l'"ancien régime" en droits miniers du "nouvel ordre" s'est révélé riche en ambiguïté et en possibilités de discrétion ministérielle quant à ce qui constituait une conversion conforme à la BEE. Cela avait des implications directes sur l'investissement. Les transactions dans le secteur minier se déroulent sur de nombreuses années et sont confrontées au risque inhérent de comportements opportunistes visant à exproprier (North, 1981). Ce dilemme décrit le problème fondamental que Vernon (1971) appelait le "contrat périmé", ou le problème de "l'engagement crédible" (North, 1981 ; Haber, Razo & Maurer, 2003). Plus un investisseur investit en capital pour développer ou étendre une mine, plus l'investisseur devient captif du gouvernement. Le gouvernement, à son tour, a le pouvoir discrétionnaire en matière de politique, même dans le contexte d'un État de droit universel relativement robuste.

Chaque investisseur pouvait se conformer aux règles - et il y avait effectivement une conformité aux règles - mais résoudre le problème de l'engagement crédible se résumait à des accords : la qualité des accords au fil du temps dans un jeu en plusieurs manches de BEE. Ainsi, même s'il

est vrai que "l'Afrique du Sud a manqué le boom des matières premières", cela n'explique toujours pas la variation des performances au niveau de l'entreprise et de la mine.

CHAPITRE 2 Cadre théorique de l'économie politique de l'investissement privé irréversible et de la transformation de l'élite

Ce chapitre adopte le cadre multi-niveaux introduit au chapitre 1 pour développer le cadre théorique.

Résumé du processus ou du jeu théorisé

La Partie I a pour objectif d'étudier la variation des performances de l'investissement fixe et la variation de la transformation de l'élite au niveau des accords. Un accord est essentiellement un arrangement institutionnel qui varie en termes de sa capacité à "structurer l'interaction humaine" en fonction des ingrédients clés qui le composent : les partenaires et la solidité de l'accord. Cela est directement lié à la théorie de l'engagement crédible, qui est le but sous-jacent des arrangements institutionnels : les investisseurs cherchent à sécuriser une certaine certitude dans la transaction, ils cherchent donc à établir une certaine prévisibilité dans les règles et les comportements des contreparties (North, 1993). L'étude est également liée à la théorie de l'investissement irréversible dans l'incertitude, qui met l'accent sur l'impact de l'incertitude sur l'investissement et l'accumulation du capital.

L'idée principale est que les accords d'autonomisation sont des réponses des acteurs du capital blanc en place (incumbents ou I-firms) à un jeu qui les oblige à conclure des accords et à maximiser leur objectif économique : sécuriser des actifs et obtenir des rendements appropriés sous une certaine certitude crédible. En jouant à ce jeu, l'acteur en place peut jouer un jeu à long terme - le capital patient, ou un jeu opportuniste - le capital opportuniste ou prédateur. En fonction de cette orientation de l'I-firm, il cherchera à conclure un accord à deux niveaux. Premièrement, il cherchera un accord avec le gouvernement, appelé accord au niveau de la corporate-politique ou accord I-firm-gouvernement. L'accord recherché serait soit un accord de collusion si l'I-firm est prédateur, soit un accord de développement et de transformation si l'I-firm est patient. Cela est possible car le gouvernement compte à la fois des dirigeants développementaux et prédateurs. Deuxièmement, il cherchera des accords avec un ensemble d'élites noires politiquement influentes au niveau des actifs. Les accords au niveau des actifs constituent des transactions d'autonomisation. Cette structure des accords à deux niveaux

découle du cadre de gouvernance de l'Afrique du Sud, comme suit. Tout d'abord, le gouvernement ou le parti politique au pouvoir est le pouvoir politique, ainsi les I-firms cherchent ordinairement à élaborer des accords explicites avec le gouvernement qui signalent la coopération. Deuxièmement, la primauté du droit et la primauté de la loi créent un niveau de règles que les I-firms doivent gérer en utilisant stratégiquement les accords BEE.

À leur tour, les élites noires (entrants ou E-firms) - principalement politiquement connectées - ont un incitatif à conclure des accords pour accumuler de la richesse et se sélectionneront systématiquement auprès des incumbents compatibles avec leur stratégie de maximisation. Autrement dit, les entrants se situent également sur le spectre du capital, avec d'un côté le capital patient et de l'autre le capital prédateur. Ainsi, chaque incumbent doit décider de s'associer à un entrant qu'il estime le mieux compatible avec sa stratégie d'entreprise consistant à "jouer le jeu". Chaque entrant cherchera un incumbent qui correspondra à son moyen préféré d'accumulation : partenariats productifs (joint-ventures) versus accords spéculatifs et avantageux. Par conséquent, les partenariats tendront à ne pas être aléatoires.

Des raisons supplémentaires de cette non-aléatorité incluent les factions politiques au sein du parti au pouvoir. Dans un règlement politique personnalisé et élitiste tel que l'Afrique du Sud, la personnalité des dirigeants du parti politique au pouvoir compte, créant une typologie d'accès aux faveurs de l'État telle que les protections et l'application de la loi en "insider" et "outsider". Si tel est le cas, les partenariats qui dépendent fortement des changements de factions au sein du parti au pouvoir seront plus fragiles que les partenariats qui sont à distance, mais que le parti au pouvoir considère comme légitimes sur d'autres critères tels que la race, la participation communautaire, le syndicat influent et les entreprises noires organisées qui soutiennent le parti au pouvoir.

Dans ce jeu, les accords sont dynamiques car les factions politiques et les conditions du marché changent avec le temps, et les partenariats peuvent donc être révisés en fonction des accords qui échouent par rapport à ceux qui restent robustes. Par conséquent, il s'agit d'un jeu itératif avec de multiples rounds où les partenaires ont la possibilité de rester dans un accord ou de le quitter. On s'attend à ce que les accords qui restent robustes avec le temps, principalement parce qu'ils sont structurés de manière à refléter la clairvoyance et la patience, entraînent des investissements élevés et soutenus. Les accords qui sont fragiles parce qu'ils reposent sur des stratégies spéculatives à court terme aboutiront soit à des accords effondrés, soit dans le meilleur des cas, à de mauvaises performances en matière d'investissement fixe. Étant donné que l'Afrique du Sud

a affiché beaucoup moins que son potentiel d'investissement fixe pendant la période de boom des matières premières, on s'attend à une variation du succès des accords, avec davantage d'accords reflétant des partenariats médiocres et des accords échoués. Ces partenariats médiocres, par définition, reflètent des accords de mauvaise qualité.

CHAPITRE 3 Paradigme, méthodologie et méthodes

Ce chapitre s'appuie sur les Chapitres 1 et 2 pour présenter la stratégie générale selon laquelle la recherche a été entreprise afin d'explorer l'hypothèse des règles et des accords. Le chapitre décrit principalement la méthodologie et les méthodes de recherche adoptées. Il examine également la rigueur du processus par rapport à l'hypothèse. En ce faisant, ce chapitre cherche à montrer comment les explications de la recherche ont été élaborées et comment la contribution originale à la connaissance a été réalisée.

CHAPITRE 4 Aperçu des accords et des investissements dans l'exploitation minière du platine

Ce chapitre remplit une double fonction. Tout d'abord, il offre un examen complet de la performance en matière d'investissement de l'industrie minière du platine au fil du temps. Deuxièmement, il catégorise les modèles d'investissement dans l'exploitation minière du platine en fonction des partenariats et des niveaux correspondants d'investissement en capital liés à chaque partenariat. En suivant cette approche, le chapitre facilite une exploration de la manière dont les acteurs peuvent établir des engagements crédibles pour maintenir des investissements continus. De plus, il pose les bases pour identifier les évolutions institutionnelles essentielles à l'émergence de capitalistes noirs productifs. Ce chapitre examine et explique en outre la manifestation empirique de ces dynamiques. La contribution du chapitre réside dans le fait qu'au-delà de l'image générale de sous-investissement en capital dans le secteur minier du platine, il existe plusieurs investissements de succès variable, chacun étant soutenu par une forme d'accord. Ces données descriptives fournissent la base de l'exploration entreprise dans les chapitres suivants.

CHAPITRE 5 Traçage de la stratégie d'entreprise du groupe Anglo et de l'émergence d'African Rainbow Minerals

Ce chapitre met en lumière les stratégies d'entreprise d'Anglo American et d'African Rainbow Minerals à travers un récit structuré et empiriquement fondé. Il utilise plusieurs sources savantes, d'archives et documentaires pour construire une contribution originale sur la manière de comprendre analytiquement l'émergence, la croissance et l'influence de ces entreprises dans l'économie politique de l'Afrique du Sud et, surtout, dans la formation et le succès de la politique de promotion de l'autonomisation économique des Noirs. En construisant un "jeu" dans lequel on peut observer Anglo et ARM en action sur plusieurs tours, l'étude apprend empiriquement le comportement du capital patient et comment ce comportement joue un rôle agential dans la trajectoire de l'accumulation de capital et des relations entre l'État et les entreprises en Afrique du Sud. Le chapitre souligne l'importance des différences dans les stratégies d'entreprise, dans la mesure où, en fin de compte, les stratégies d'entreprise interagissent et influencent le développement sectoriel et national.

CHAPITRE 6 Amplats : Traçage des accords à deux niveaux, des investissements ultérieurs et de la transformation

Ce chapitre retrace les accords et les investissements en capital résultants d'Anglo American Platinum, principalement entre 2000 et 2018. En utilisant de multiples sources de données telles que les rapports annuels, les données d'investissement fixe de Nedbank, et les archives des actualités de l'entreprise, des annonces et des circulaires dans McGregorBFA, le chapitre montre comment et pourquoi une entreprise économiquement importante, Amplats, a atténué le risque d'expropriation d'une manière qui a soutenu l'investissement soutenu et la transformation dans le secteur du platine, malgré des niveaux généralement faibles d'investissement et la défaillance généralisée des entreprises BEE dans l'industrie. En plongeant au-delà de l'image généralement peu enthousiasmante de l'autonomisation économique des Noirs et de l'investissement, l'étude offre une lecture subtile des succès et des échecs ainsi que des processus schématiques qui produisent ces résultats. Les nuances résident dans la qualité des accords et des partenariats qui agissent comme des mécanismes d'engagement crédible. Lorsqu'il y a des lacunes dans

l'application, l'ombre de l'État de droit robuste joue un rôle important dans la facilitation des accords, bien que la loi ne puisse pas remplacer la nécessité d'accords en tant que dispositifs d'engagement crédible. La portée de cette étude, notamment dans le contexte du processus de transformation post-apartheid, est que les chercheurs, les décideurs et les entreprises peuvent désormais (1) apprécier et donc mettre en avant le concept d'engagement crédible lors de la conception de politiques liées à l'investissement, (2) apprendre quel type d'accords ou de partenariats peuvent inspirer confiance et longévité à l'entreprise privée, et (3) comment et pourquoi ces arrangements peuvent être compatibles avec l'objectif d'une véritable transformation de l'élite raciale.

CHAPITRE 7 - Capital myope de copinage ? Lonrho, Lonmin et Ramaphosa

Ce chapitre examine ce que plusieurs pays africains ont en commun dans leur histoire de décolonisation, à savoir l'implication de la société multinationale Lonrho. À l'époque de la décolonisation, de la nationalisation et de la désinvestissement, Lonrho émerge de l'insignifiance pour devenir l'une des plus grandes et des plus répandues des sociétés britanniques en Afrique. Comment Lonrho a-t-elle réussi à échapper à la prédation gouvernementale et à prospérer malgré les obstacles ? S'appuyant sur de nombreuses sources universitaires, des actualités et des rapports de renseignement déclassifiés, ce chapitre retrace et analyse la stratégie d'entreprise de Lonrho. Contrairement à une préoccupation axée sur la sécurité des droits de propriété à l'échelle nationale, le chapitre montre comment Lonrho s'est concentrée sur la création d'un engagement crédible en poursuivant des accords ciblés et personnalisés avec les dirigeants politiques au pouvoir. La stratégie du "business as politics" était une stratégie gagnante pour Lonrho, non seulement dans les États faibles sur le plan institutionnel, mais aussi dans des contextes africains potentiellement plus développés sur le plan institutionnel. Le chapitre soutient que Lonrho considérait que la politique de libération africaine était motivée par les mêmes incitations, quel que soit le développement institutionnel. Par conséquent, pour Lonrho, résoudre le problème de la sécurité des droits de propriété ne résidait pas dans les institutions formelles, mais dans la pratique de la politique. La société apprendrait à appliquer cette lecture des pays africains en cours de décolonisation même à l'Afrique du Sud lors de la démocratisation, en s'adaptant politiquement à la politique sud-africaine d'autonomisation économique des Noirs basée sur des règles, jouant ainsi avec succès sur les intérêts matériels de l'élite. Ainsi, le cas démontre une stratégie d'entreprise qui traverse différents accords politiques dans le processus de libération

africaine. Le chapitre tire quelques conclusions importantes. Premièrement, le capitalisme opportuniste prospère grâce à un leadership politique à courte vue. Grâce à des accords de collusion, le capital opportuniste peut contourner les demandes d'investissements à long terme qui apportent de nouvelles technologies et du capital. Deuxièmement, le capitalisme opportuniste est un maître de l'isomorphisme en tant que stratégie de légitimation. Ces conclusions sur Lonrho seront explorées plus en détail au chapitre 8 lors de l'étude des accords de Lonmin et de la performance de l'investissement en capital.

CHAPITRE 8 Lonmin : Trajectoire des accords à deux niveaux, investissements ultérieurs et transformation

Ce chapitre étudie les accords et les résultats des investissements en capital du capital opportuniste. L'étude de cas porte sur Lonmin, une entreprise dont la stratégie d'entreprise prospère grâce à des accords de collusion et à l'isomorphisme. En utilisant des données collectées à partir de rapports annuels, d'archives de nouvelles d'entreprise, d'annonces et de circulaires de McGregorBFA, ainsi que d'autres sources journalistiques, le chapitre trace les accords de Lonmin avec le gouvernement et ses partenaires BEE afin d'examiner dans quelle mesure ces accords sont compatibles avec l'investissement et la transformation. Le chapitre conclut qu'il s'agit d'un cas clair de capital dont la stratégie d'entreprise ne parvient pas à stabiliser les accords BEE. Plus précisément, l'exemple de l'IFC World Bank d'une bonne transformation dans le secteur minier, l'accord BEE Inwala conçu par Lonmin, démontre clairement un cas de contournement de l'"esprit" de la transformation productive. La conclusion générale est que l'opportunisme de Lonmin a créé des accords qui n'ont pas pu être tenus, avec des partenaires incapables de livrer. Cela a créé des opportunités d'investissement manquées.

CHAPITRE 9 Les Bafokeng et les Bakgatla - corporatisation communautaire sous la direction du développement et de la prédation

Ce chapitre est une étude de cas des communautés Royal Bafokeng et Bakgatla ba Kgafela en tant que partenaires BEE d'Amplats. L'étude de cas documente comment ces communautés sont passées de la marginalisation par le biais de la dépossession des terres à la corporatisation et à la commercialisation de leurs intérêts en platine. L'étude de cas met en évidence comment une combinaison d'une entreprise patiente, d'une autorité traditionnelle patiente et du soutien de l'État de droit peut produire des partenariats cohérents. L'étude de cas montre également que lorsque l'un de ces éléments fait défaut, cela peut conduire à des partenariats plus faibles avec des résultats moins bénéfiques.

CHAPITRE 10 Les accords communautaires d'Amplats, les investissements ultérieurs et la transformation

Ce chapitre s'appuie sur les histoires des Bafokeng et des Bakgatla pour retracer les accords des communautés avec Amplats. L'étude constate que bien que la qualité des accords entre les deux communautés varie, les deux cas produisent des investissements ultérieurs réussis. Les Royal Bafokeng se distinguent comme un exemple d'investissement de premier ordre prospère et de transformation sociale.

CHAPITRE 11 De la règle BEE à la "transformation productive"

Ce chapitre discute des conclusions de la première partie de la thèse, en relation avec ce que nous apprenons sur le BEE, les accords et l'investissement. En d'autres termes, le chapitre réfléchit à l'hypothèse selon laquelle de bons accords, plutôt que des règles, apportent et maintiennent l'investissement en capital. Le chapitre 14 fournira la conclusion générale, en se penchant sur la question de recherche globale consistant à concilier la transformation de la classe raciale avec la croissance de l'investissement. Le chapitre 14 inclura les conclusions découlant des résultats de la deuxième partie de la thèse.

CHAPTER 12 – L'impact économique de l'investissement dans l'industrie minière sur les niveaux de pauvreté et l'emploi dans les communautés locales en Afrique du Sud, de 1996 à 2011

Ce chapitre entreprend une analyse approfondie des conséquences économiques locales des opérations minières industrielles sur les communautés en Afrique du Sud. L'étude explore cette question en utilisant un échantillon exhaustif du recensement comprenant environ 20 millions d'observations provenant de cinq provinces minières principales dans des zones économiquement défavorisées. La période couvre de 1996 à 2011, englobant la période depuis l'avènement de la démocratie jusqu'au pic de la hausse des prix des matières premières et des accords BEE dans le secteur minier. Ce jeu de données est combiné avec des données géocodées provenant d'environ 400 mines par an, ainsi qu'avec les prix mondiaux des matières premières. Le principal défi de cette recherche réside dans l'isolation de l'impact de l'expansion minière sur les niveaux de pauvreté en termes de revenu et sur les résultats en matière d'emploi au niveau local. Pour ce faire, l'étude tire parti de trois sources distinctes de variation. Premièrement, la hausse des prix des matières premières reflète la hausse de l'activité minière. Deuxièmement, les fluctuations de la proximité de la mine la plus proche en raison de l'ouverture ou de la fermeture des mines introduisent une source d'exposition hétérogène à l'activité minière. La troisième source de variation réside dans les diverses zones géologiques de production de matières premières, chacune entraînant des liens localisés distincts et, par conséquent, des impacts nets différents. En exploitant ces variations, l'étude examine divers sous-ensembles d'échantillons, y compris des sous-ensembles de données définis par province, proximité des mines et type de matières premières.

En général, lorsque l'ouverture d'une mine a lieu localement, la probabilité qu'une personne sorte de la pauvreté en termes de revenu augmente de manière significative. De même, la probabilité de trouver un emploi augmente de manière significative. La hausse des prix des matières premières est un moment important. Elle amplifie à la fois les avantages et les compromis de l'activité minière. L'intensité de l'exploitation minière produit le même effet. Les impacts varient en fonction du type de matière première et de la province. Lors des périodes de hausse des prix, le platine et l'or émergent comme des catalyseurs clés pour réduire la pauvreté et favoriser la

croissance de l'emploi, la province du Limpopo recueillant une part importante de ces effets positifs. L'étude soulève des préoccupations concernant les avantages transitoires des périodes de hausse des prix des matières premières et les éventuelles conséquences à long terme défavorables de l'activité minière.

CHAPTER 13 – Soulagement ou malédiction supplémentaire : la découverte de minéraux dans les anciens bantoustans et l'impact du boom des prix des matières premières des années 2000, de 1970 à 2011

Ce chapitre explore les effets de la politique de Développement Séparé, qui a conduit à la création des bantoustans, et la découverte fortuite de ressources minérales à l'intérieur et autour de ces zones. La question se pose de savoir si la découverte de minéraux et l'activité minière ultérieure, en particulier pendant le boom des prix des matières premières des années 2000, ont apporté un soulagement ou ont exacerbé les problèmes existants. Malgré l'importance de cette question, il existe une notable absence d'études empiriques qui analysent et expliquent de manière approfondie l'impact de l'exploitation minière industrielle sur la pauvreté et l'emploi dans ces régions. Le massacre de Marikana, au cours duquel 34 mineurs ont été tués lors d'une grève, souligne les débats persistants sur le rôle de l'exploitation minière dans les communautés locales, en particulier celles situées près des anciens bantoustans. Malgré les efforts visant à transformer l'exploitation minière en une activité économique bénéfique pour ces communautés, les niveaux de pauvreté demeurent élevés.

En s'appuyant sur la littérature existante et sur des données de recensement couvrant la période de 1970 à 1991, cette étude offre un aperçu du contexte historique de la pauvreté dans les anciens bantoustans. Elle met en évidence la création des bantoustans par le biais de la politique de Développement Séparé comme un facteur central contribuant à la pauvreté structurelle enracinée et aux taux de chômage élevés. L'étude adopte une approche empirique en utilisant des données de recensement au niveau individuel de 1996, 2001 et 2011, combinées à des informations minières géocodées.

L'analyse implique une comparaison entre les circonscriptions minières situées à l'intérieur des anciens bantoustans et celles situées à l'extérieur de ces zones. Les résultats révèlent des

désavantages constants pour les personnes résidant dans les régions des anciens bantoustans. Alors que l'activité minière industrielle conduit généralement à une réduction de la pauvreté en termes de revenu local et à une augmentation des opportunités d'emploi, ces effets positifs sont atténués dans les régions des anciens bantoustans. Une exploration plus poussée des variations au sein des bantoustans révèle des développements miniers localisés, comme dans la région du bantoustan de Venda, où les habitants des circonscriptions minières à l'intérieur des bantoustans constatent des améliorations de la pauvreté et de l'emploi grâce aux activités minières. Néanmoins, l'étude soulève des préoccupations concernant la volatilité des niveaux d'emploi, qui ont tendance à réagir aux fluctuations des prix des matières premières.

CHAPITRE 14 : Conclusion de la Thèse. Concilier la transformation de classe raciale avec une croissance de l'investissement inclusif

14.1. Introduction

Comme articulé au Chapitre 1, l'Afrique du Sud ne peut pas abandonner l'impératif de la transformation, ni renoncer à la croissance de l'investissement en capital. La transformation est cruciale pour la stabilité politique, tandis que l'investissement est essentiel pour la croissance économique et la viabilité de l'entreprise de transformation. Lorsque ces impératifs se conjuguent, la transformation se produit de manière à stimuler l'investissement, et une économie transformée crée un marché plus grand et plus stable. Pour relever le défi complexe de rectifier l'héritage politique et économique complexe de l'Afrique du Sud, une économie productive générant des revenus productifs grâce à l'entrepreneuriat, à l'entreprise et au développement des compétences est indispensable.

Cet argument de conclusion est structuré comme suit : premièrement, il examine le "quoi" en réfléchissant à l'accord politique de 1994 en Afrique du Sud et aux sous-accords qui le constituent, notamment l'inclusion de nouvelles élites et l'incorporation de non-élites basée sur une croissance économique socialement inclusive anticipée. Deuxièmement, il explore le "pourquoi" en mettant en lumière l'importance de l'investissement en capital et social dans la réalisation et le maintien de l'accord politique et du contrat social. Troisièmement, il examine le "comment" de la culture de l'investissement. Ces trois dimensions résument certaines des principales contributions de la thèse. Une section ultérieure expose les limites du projet et les orientations de recherche futures qui en découlent. Enfin, l'auteur conclut en exprimant un espoir

inébranlable et une "passion pour le possible", servant de base aux efforts continus visant à améliorer une société inégale et en développement en Afrique du Sud.

14.2. Les accords politiques et leurs sous-accords

La pierre angulaire de l'accord politique en Afrique du Sud repose sur un ensemble de sous-accords, englobant l'ascension graduelle des nouveaux entrants élites à la prééminence économique et l'intégration économique des non-élites. Ces sous-accords fonctionnent dans le cadre général de la redistribution raciale pour faciliter la transformation de la classe raciale. Cela va au-delà de la simple redistribution de la richesse ; il aspire à construire une nation inclusive, racialement et socialement harmonieuse grâce à la croissance économique. Permettre et maintenir les demandes socio-économiques toujours croissantes de l'accord politique nécessite des investissements en capital et de la productivité, ce qui pose un défi fondamental partagé par de nombreux pays à revenu intermédiaire : la poursuite d'une croissance durable et inclusive axée sur l'investissement. Cependant, l'interaction entre la transformation et l'investissement penche de plus en plus hors d'équilibre en raison des relations tendues entre l'État et les entreprises, des fractures dans la gouvernance du parti au pouvoir et des pressions socio-économiques croissantes. Plutôt que d'être une plateforme d'engagement productif, la transformation devient un domaine de contestation non productive en vue de la recherche de rentes, créant un décalage entre la transformation et l'investissement. Cette exclusivité mutuelle conduit à une croissance sous-optimale, à des inégalités durables et à un chômage élevé.

14.3. L'investissement en capital alimente l'accord politique

Chaque sous-accord au sein de l'accord politique repose sur une économie en croissance ; sans cette croissance, les conséquences vont de la détérioration des niveaux de vie au déclin de la gouvernance. Les investissements en capital orientés vers des activités productives créatrices d'emplois fournissent un flux de financement vital pour ces sous-accords. Dans le secteur minier de l'Afrique du Sud, qui emploie de manière substantielle des travailleurs non qualifiés par rapport aux secteurs tertiaires, les échecs des investissements découlant d'accords élites prédateurs affectent directement les familles appauvries. L'étude révèle comment les échecs des investissements s'accumulent au niveau des accords, compromettant l'engagement crédible et provoquant un déclin global de l'investissement. Cette spirale descendante met en évidence l'interconnexion entre l'investissement et la transformation. L'accord plus large entre l'État et les entreprises s'est érodé, entravant l'investissement. Ce défi dépasse le secteur minier pour s'étendre à l'ensemble de l'économie.

14.4. Maintenir l'investissement continu

14.4.1. La primauté de l'engagement crédible

L'engagement crédible devient un facteur essentiel dans les décisions d'investissement. Bien que les décisions de justice aient confirmé le principe "une fois autonomisé, toujours autonomisé" dans le secteur minier, protégeant ainsi les entreprises incumbentes des exigences plus élevées en matière de propriété par des BEE, cela ne répond pas entièrement aux impératifs de transformation, laissant une incertitude résiduelle. Les règles formelles en matière d'autonomisation ne peuvent pas à elles seules garantir la transformation ; une transformation durable nécessite une coopération continue et systématique entre les entreprises et le gouvernement, fondée sur la croissance et la coopération mutuelle. Ce partenariat durable est le fondement de la réconciliation entre la transformation, l'investissement et la croissance.

14.4.2. Bâtir de bons partenariats comme voie à suivre

La crédibilité du développement orienté vers la croissance et la transformation repose sur des partenaires et des leaders fiables. Bien que les acteurs opportunistes puissent dominer, l'existence de partenaires patients et productifs est sous-estimée. L'étude révèle que certaines politiques BEE ont involontairement facilité des pratiques prédatrices, évinçant les partenaires patients. Pourtant, des changements sont en cours alors que les connexions politiques perdent de leur influence, laissant place à de bons partenariats. Les investisseurs institutionnels patients, animés par des valeurs sociales et des investissements à long terme, pourraient stimuler des cercles vertueux de renforcement des capacités, de productivité et de création d'emplois. À mesure que les accords BEE s'amenuisent, l'espace s'ouvre pour l'entrepreneuriat productif, socialement et axé sur le marché.

14.4.3. L'investissement socialement responsable est important et stratégique

Les chapitres 9 à 13 mettent l'accent sur le double rôle des communautés en tant qu'acteurs et victimes dans les investissements. L'inclusion des non-élites dans l'accord politique, en particulier des communautés et du travail, souligne l'importance d'une "licence sociale" pour opérer, essentielle pour la durabilité des opérations minières. La priorité accordée à la localisation, à la création d'emplois et à la sensibilité environnementale renforce la légitimité de l'accord politique et favorise une exploitation minière durable. Un équilibre entre les multiplicateurs positifs et les retombées nocives est essentiel pour maximiser les avantages de l'exploitation minière. Les preuves empiriques soulignent l'impact nuancé de l'exploitation

minière sur les communautés locales, nécessitant des partenariats inclusifs et progressistes pour des opportunités économiques équitables.

14.4.4. La politique compte, l'État compte, de manière fonctionnelle

L'étude positionne la politique comme un moteur stratégique de l'investissement, en soulignant l'alignement des incitations sur le contexte et les relations pour un engagement à long terme. Le cadre conceptuel relie l'accord politique macro à des accords et des partenariats de niveau micro, illustrant comment la politique se déploie au niveau des accords. L'interaction dynamique des factions politiques au sein du parti au pouvoir influence la qualité des accords. Bien que des États forts et un leadership à long terme soient essentiels, la coopération ne signifie pas nécessairement une "capture de l'État". Les gains positifs résultent de la coopération plutôt que de la collusion, offrant des intérêts convergents propices à une coopération mutuellement bénéfique à différents niveaux.

14.5. Limitations et orientations de recherche futures

Il existe des limites à la généralisation des hypothèses et des résultats de l'étude. Tout d'abord, le travail souffre de limitations liées aux données. La première partie est limitée par le nombre d'études de cas au niveau des entreprises incumbentes, ainsi que par l'absence d'entretiens (en grande partie en raison des contraintes résultant de la pandémie de COVID) pour compléter la recherche et l'analyse. De plus, étant donné qu'il se concentre uniquement sur le secteur minier, les conclusions de l'étude peuvent ne pas être applicables à d'autres secteurs. De même, la deuxième partie de la thèse est limitée par le fait qu'elle ne comporte que trois vagues dans le panel (1996, 2001 et 2011), ainsi que par l'absence de travail sur le terrain dans les communautés minières, ce qui aurait pu enrichir les conclusions et les mettre à jour au-delà du recensement de 2011. En outre, l'étude pourrait être améliorée en appliquant des techniques d'estimation récentes qui permettent de résoudre les problèmes liés aux traitements échelonnés.

Ces limites font également de l'étude un sujet d'extension à la phase post-doctorale.

14.6. Conviction de l'espoir à vie et de "la passion du possible"

En tant que projet multidisciplinaire, cette thèse apporte une contribution unique en explorant le rôle des accords dans la création d'un engagement d'investissement crédible et en examinant l'impact de l'exploitation minière sur les communautés locales. La recherche met en lumière différentes trajectoires de transformation des élites liées aux stratégies d'entreprise et aux types

d'accords. L'étude souligne que la collaboration productive entre l'État et les entreprises est essentielle pour réformer les économies, en prônant la coopération plutôt que la collusion.

En conclusion, l'auteur de la thèse reste fermement convaincu de la "passion du possible", animé par la recherche d'une collaboration productive entre les parties prenantes, offrant un phare d'optimisme pour faire progresser le voyage transformateur et développemental de l'Afrique du Sud. Maintenant, il est temps de commencer.

Summary of the structure of the PhD

The overarching research question of the thesis is focused on reconciling racial class transformation with socially inclusive capital investment growth. The thesis is divided into two main parts to address this question.

Part I (Chapter 1 to Chapter 11): This section examines the reconciliation of *elite transformation* and capital investment within the mining sector. Racial class transformation, established through laws and policies like the Black Economic Empowerment Act and the Mineral and Petroleum Resources Development Act, is explored in relation to the creation of a new black capitalist class. The research essentially uses two comparative case studies centred around existing mining firms to analyse the efforts to promote capital investment. It highlights the problem of expropriation risk arising from the uncertainty created by everchanging rules to effect racial transformation. The study emphasises the need for credible commitment between the government and investors to resolve this issue. It reveals that good investment deals are the basis for reconciliation between transformation and investment growth, with patient and cooperative strategies yielding positive outcomes.

Part II (Chapter 12 to Chapter 13): This part evaluates the local economic impact of mining investments on mining communities. It assesses the inclusivity of mining investments in terms of benefiting local communities. Econometric analysis is applied to a panel dataset comprising individual observations from census data between 1996 and 2011. This dataset is combined with mining data, including the location of mines and commodity prices, to examine the effects of mining on poverty and employment within mining communities.

Conclusion: The thesis concludes by reflecting on the central question of reconciling racial class transformation with inclusive capital investment. It draws together the findings from both parts of the research and offers insights into how deals, cooperation, and strategies at both the elite and community levels can contribute to achieving this reconciliation.

In summary, the PhD's structure involves investigating the interplay between elite transformation, capital investment, and local economic impact, ultimately seeking ways to balance racial class transformation with inclusive growth.

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List of Acronyms, Abbreviations and Technical Terms

African National Congress (ANC)
African Rainbow Minerals (ARM)
Anglo American Corporation (or 'Anglo')
Anglo American Platinum (Amplats)
BEE partners (E-firms or E-partners)
Black Economic Empowerment (BEE)
Black Economic Empowerment Commission (BEECom)
Broad-based Black Economic Empowerment Act 53 of 2003 (BEE Act)
Congress of South African Trade Unions (COSATU)
Consolidated African Mines (CAM)
Consolidated Mining Corporation (CMC)
Department of Mineral Resources (DMR)
Gross Domestic Product (GDP)
Independent Electoral Commission of South Africa (IEC)
Impala Platinum (Implats)
Incumbent firms (I-firms or I-partners)
Industrial Development Corporation (IDC)
Johannesburg Consolidated Investments (JCI)
Johannesburg Stock Exchange (JSE)
Joint ventures (JVs)
Lebowa Minerals Trust (LMT)
Limited access orders (LAOs)
Linear Probability Model (LPM)
Mineral and Petroleum Resources Development Act (MPRDA)
Minerals, Energy, and Finance complex (MEFC)
National African Federated Chamber of Commerce (NAFCOC)
New Africa Investments Limited (NAIL)
Platinum Group Metals (PGM)
South African Local Government Association (SALGA)
South African Communist Party (SACP)
Statistics South Africa (StatsSA)
United States Geological Survey (USGS)
Upper poverty = Upper-bound poverty line

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**PART I OF THE PHD. ELITE
TRANSFORMATION AND CAPITAL
INVESTMENT GROWTH**

SECTION A – Introduction, theory, methodology, and case overview

CHAPTER 1 Racial class transformation and fixed investment

1.1. The purpose of the PhD, the hypothesis, and the argument

South Africa faces a development dilemma of growing the economy through capital investment while simultaneously racially transforming the economy by using the policy of Black Economic Empowerment (BEE). Racial class transformation is at the heart of South Africa's political settlement that supported a peaceful transition. To sustain the project of class transformation requires ongoing fixed investment.

Formulating the rules for such transformation is easier than achieving transformation. There is no guarantee that such rules, (1) foster investment, or (2) create black owned productive enterprises or entrepreneurs. On the contrary, an underlying problem of credible commitment constrains investment. If government has the power to protect a set of asset owners, it can also use that power to abrogate their property rights.¹² Asset holders require credible commitment, which compliance to rules cannot provide. A universal robust rule of law – a striking feature of the South Africa case – is helpful, but insufficient. Courts may rule on the law and provide clarity on policy, but government retains the prerogative to create policy, and policy is susceptible to the preferences and vicissitudes of ruling political actors.

Even if rules are made and followed, there is no guarantee that the result will be a productive entrepreneurial class crucial to a virtuous circle of creating wealth and sustaining growth. Predatory actors may manage rules for personal benefit in ways that undermine a programmatic developmental project. Therefore, the process of transforming the economy and broadening opportunities through investment requires methods of building credible commitment that remain compatible with investment and transformation. The success of investment-led transformation requires two essential components. Firstly, there needs to be a presence of incumbent capital that not only shares the vision of investment-led transformation but is also endowed with the foresight to embrace an adaptive corporate strategy. Secondly, an essential requirement is a black elite that exhibits qualities of patience and productivity, eschewing rapid personal enrichment in favour of a more enduring and sustainable progress. This study follows Andrew's (1997) definition of the concept:

¹² The PhD uses the terms "government" and "state" interchangeably.

Corporate strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and noneconomic contribution it intends to make to its shareholders, employees, customers, and communities.¹³

This definition captures a crucial part of the argument being developed, namely that large incumbent firms have corporate strategies which over time can reveal their preferences and interests in relation to country political economy issues, such as the project of elite transformation. Based on their corporate strategies, which can change over time, firms may decide to cooperate with social and developmental imperatives or they may act in short sighted ways.¹⁴

1.1.1. Research question and hypothesis

The overarching research question is: (How) can the policy objectives of expanding capital investment and fostering racial elite transformation be reconciled?

South Africa faces a problem of low capital investment and a highly unequal economy. The question of how to stimulate more investment seemingly collides with the policy of BEE, which requires investors to undertake share-ownership deals with local black entrants. A typical response is that this requirement deters investment and productive transformation. The logic goes as follows. First, BEE is an obstacle to investment because it is riddled with the credible commitment problem. Once an investor complies with the rules, the same state that makes the rules can change those rules, eroding value for investors. Second, BEE curbs productive transformation because it encourages self-selection of predatory politically connected individuals who abuse the programme for self-enrichment, without building thriving enterprises compatible with national development.

This PhD meets those arguments in two important ways. First, South Africa needs both capital investment growth, and transformation, in parallel. It is politically unviable to discard the project

¹³ For simplicity, the terms “corporate culture” and “corporate strategy” are used interchangeably. By corporate culture the study means the dispositions and multi-dimensional set of behaviours that align along the patient-predatory capital spectrum (outlined in Chapter 2). Insight into corporate culture comes from studying the history of the players, rather than working backwards from the specific outcome of specific deals (which would make the analysis tautological).

¹⁴ That the corporate strategies of firms can be observed by careful study is empirically leveraged (used) by this PhD.

of transformation. It is also not economically sustainable to dispense with investment growth. Transformation is imperative to the stability of the political settlement, while investment is vital for economic growth and the viability of the transformation project. How can the two seemingly mutually exclusive imperatives meet in mutually beneficial ways? Second, the PhD contends that if we look beneath the generally dim picture of low growth in capital investment and failure of transformation policy, we will find both successes and failures at the level of deals. What distinguished successful from failed deals? All investors face the same requirements to undertake BEE deals along with the risks involved, and the investor strategy of co-opting politically connected entrants in BEE deals is ubiquitous, yet some deals thrived in investment compatible ways, while others failed to attract or sustain subsequent investment. The PhD argues that there are differences in the deals: some could lock-in credible commitment while others failed to stabilise or be credible.

Taking the particular case of South Africa's large oligopoly-dominated economy in the 1990s as a point of departure, the hypothesis explored is that the basis of credible commitment is ultimately a deal. In turn, investment is highest and most sustainable when there are two conditions or levels of deals undertaken by incumbent capital.

- (1) there is a tangible, continually reaffirmed deal of mutual cooperation on transformation rather than predation between incumbent capital and the ruling political elite or party or government.
- (2) there is a durable, patient partnership that locks in credible commitment at the firm or asset level; correspondingly investment is lower when the deal is struck with a predatory partner.

A preoccupation in South Africa with getting the rules right has led to uncertainty in rules, undermining investment and growth (Levy, Hirsch, Naidoo, and Nxele, 2021).¹⁵ In the context of BEE, getting the deals right rather than getting the rules right drives investment.

Empirically, there are different ways of approaching the imperative of elite transformation. These ways range between farsighted patient capital on one end, and predatory capital on the other end. This variation in capital (i.e., the patient-predatory capital spectrum) empirically manifests in pockets of investment and transformation at one end, and predation and asset stripping at the other end. This reading of investment and transformation outcomes in the past

¹⁵ Attempting to cover every contingency with a rule is a very high transactions cost endeavour.

three decades in South Africa contributes to knowledge about the processes that reconcile racial allocation of rents with investment growth, and the processes that lead to endemic uncertainty.

The research question and the hypothesis are framed within the literature on the political economy of state-business relations in developing countries, together with literature on political settlements, institutional economics or transaction economics, and the political determinants of investment. The question and the hypothesis have determined the scope and parameters of the project. Part I of the PhD examines the role of deals or “elite bargains” between economic and political leadership in South Africa in the context of elite transformation. The PhD does not explore other determinants of investment or evaluate the broader political settlement of South Africa, including the role of powerful actors such as unions or civil society. Nor does it examine South Africa’s industrial policy or BEE deals through alternative dimensions such as financing structures. The study is embedded in the action arena of BEE ownership deals in relation to their role in spurring investment and transformation on the one hand, and collusive rent-seeking and failures on the other hand. The study does not examine the broader policy elements of BEE.

1.1.2. The context and the case study

To achieve clarity, this study adopts a hierarchical framework that encompasses progressively detailed tiers, ranging from the overarching mega level to the intricate nano level. The mega level addresses universal concerns spanning all nations, such as the imperative of fostering capital investment growth. Moving to the macro level, the focus narrows to issues intrinsic to individual countries, typified by South Africa's distinct political landscape, the policy framework of BEE, and unique economic structure. The meso level centers on sector-specific dynamics, involving industries like mining or, more specifically, the platinum mining sector. Transitioning to the micro level, the scrutiny shifts to organisational interactions, encompassing negotiations between companies and even government entities, referred to as corporate-political level deals in this study. Lastly, the nano level delves into the asset-specific intricacies, representing the utmost granular layer of examination, notably asset level deals as they are coined within this study. Figure 1 below presents this framing visually. It shows the different levels and the overlap between the levels. The rest of this chapter and the next one use this organisation for coherence and clarity.

Figure 1 – Framing the topics in increasing order of specificity



Source: Author

Capital investment performance and elite transformation are overarching imperatives common across countries – these represent the mega level concerns. From a case study perspective, South Africa's experience at this level is marked by a protracted deficiency in capital investment over three decades of democracy, accompanied by a modest average economic growth rate of 2.42 per cent per annum between 1994 and 2021 (World Bank, 2021). Moreover, by 2022, South Africa ranked as the world's most unequal country (World Bank, 2022).

South Africa is also an upper middle income country, with relatively robust universal rule of law, and good checks and balances (Levy, Hirsch & Woolard, 2014). It is a multi-party democracy that for the past three decades has been ruled by a dominant political party, the African National Congress (ANC) (Hirsch & Levy, 2018). The ANC has become increasingly fragmented, riddled by factional battles corresponding to differences in ideology, differences in relationship to business and property rights (i.e., cooperative versus collusive relationships), and fractures between developmental insiders and interests versus predatory insiders and interests (Levy, Hirsch, Naidoo, and Nxele, 2021). The credible commitment problem arises from residual political and bureaucratic uncertainty, despite the robust rule of law.

Descending to the meso level, the hypothesis uses the mining sector as a case study, since it was the first and largest target of accumulation for elite transformation (Theobald et al., 2015). The PhD isolates the platinum mining industry, which served as a new source of investment

expansion and rent accumulation between 1994 and 2018.¹⁶ Platinum mining is a sunrise industry in South Africa, relative to old and shrinking gold, diamond, and coal mining industries. By choosing just one industry, the study manages to control for industry and type of commodity specific factors. Within platinum mining, four incumbent mining companies account for 90 per cent of production: Anglo American Platinum (Amplats), Impala Platinum (Implats), Lonmin, and Northam. Several junior mining companies share the remaining 10 per cent. This study will provide an overview of the entire platinum mining complex in Chapter 4. Thereafter, it will explore the hypothesis using the case studies of Amplats and Lonmin. Together, these two companies account for about 65 per cent of platinum mining during the period under study. The study will also show that these companies provide sufficient variation in corporate strategies, deals, investment, and transformation to provide an analytical platform for exploring Part I's hypotheses.¹⁷

The study drills down from the overall picture that South Africa has low capital investment (Fedderke, 2009) to examine variation in capital investment performance at the company level and deal level. Each company dealt with the problem of credible commitment differently, crafted different legitimating deals with government, alongside varied associations with diverse BEE partners. This variation in approaches subsequently leads to disparate investment and transformation outcomes, observed at the deal-level analysis (micro and nano levels). Therefore, in terms of the units of analysis, there are two incumbent firms (I-firms or I-partners) studied: Amplats and Lonmin in Sections B and C respectively, and Amplats/Communities in Section D. These I-firms manifest differences in their corporate strategies, oscillating along a spectrum that spans from patience to predation – the "patience-predation spectrum". These distinctions extend to the deals they broker with the government and BEE partners. It is postulated that the government, while committed to transformation, exhibits fragmentation that engenders transformative agreements with some I-firms and collusive arrangements with others.¹⁸ Notably, the lines between the government and the ruling party are frequently blurred, thus the terms are used interchangeably. The second cluster of cases pertains to the BEE partners (denoted as E-firms or E-partners), who are co-opted by each incumbent firm.

¹⁶ The period between 1994 and 2018 is the period under study. However, the research will refer to and discuss post 2018 details to keep the study updated as close to 2022 (the time of completion of this project) as possible.

¹⁷ The full PhD included Northam. However, due wordcount constraints, this case study has been reserved as a post-doctoral output.

¹⁸ In other words, government is double faced. There are G-patient and G-predatory persons or groups within government, depending on who you access in government.

The BEE partners also exhibit a spectrum of corporate strategies, spanning from patience to predation. Considering that each I-firm undertakes several deals to meet the demands of BEE, there are several BEE actors that feature in each of the two incumbent case studies of deals. For each I-firm, there are two chapters. The first chapter provides an analytic historical narrative of the I-firm and of one prominent BEE partner. Its purpose is to surface the character and corporate strategy of both the I-firm, and of its most prominent BEE partner. The second chapter then delves into all the deals undertaken by the I-firm: first the deal with government that provides an overarching deal of cooperation, then the deals with different BEE partners. These case studies are summarised in Table 1, noting that Part I of the PhD is structured according to the incumbent firms.

Table 1 – Platinum mining case studies

Section in PhD	I-firm	I-firm type of capital (finding)	E-firm and type of capital
Section B	<p>Amplats (Anglo) 1.What kind of capital is Amplats and how does its history of corporate strategies reveal this character? 2. Managing expropriation risk: Empirically studying Amplats’ deals, and evaluating outcomes of investment and transformation</p>	Patient	<p>African Rainbow Minerals (patient), Pelawan (opportunistic), Khumama (opportunistic)</p>
Section C	<p>Lonmin (Lonrho) 1.What kind of capital is Lonmin and how does its history of corporate strategies reveal this character? 2. Managing expropriation risk: Empirically studying Lonmin’s deals, and evaluating outcomes of investment and transformation</p>	Predatory	<p>Incwala (extension of Lonmin), Shanduka (opportunistic)</p>
Section D	<p>Amplats (Anglo) and Communities 1.Who are the Royal Bafokeng mining community and who are the Bakgatla ba Kgafela mining community and what kind of leadership presides over them from a commercial/capital spectrum perspective? 2. Managing expropriation risk: Empirically studying Amplats’ deals with the Bafokeng and the Bakgatla as BEE partners, and evaluating outcomes of investment and transformation</p>	Patient	<p>Communities: Leadership of Royal Bafokeng (patient) Leadership of Bakgatla ba Kgafela (opportunistic)</p>

Source: Author. Note that under Section B, Amplats’ deals with entrant international capital are also studied.

Table 1 highlights a pivotal aspect of BEE partners in South Africa, particularly concerning communally owned land. BEE partners encompass land-owning mining communities, a crucial feature influencing the bargaining dynamics and policy landscape faced by I-firms. Methodologically, this study comprehensively investigates all BEE agreements by Amplats, notably encompassing the Royal Bafokeng and the Bakgatla ba Kgafela leadership as prominent partners contributing to Amplats’ presence and success in the North West province. However, due to the qualitative disparity between these partners and individual BEE stakeholders, the community-focused chapters are positioned following the Lonmin chapter. This strategic

arrangement enhances the comparative exploration of patient-predatory capital strategies. Moreover, it situates the community-oriented chapters closer to Part II, which delves further into the ongoing discourse on the impact of mineral wealth on development.

Mining is a particularly useful case study not only because of its importance to the historical and current economic development of South Africa, but also because it is a case of contentious property rights against a background of large irreversible capital investment. Between 1998 and 2004, South Africa's ANC-led government issued legislation that entrenched BEE, and simultaneously enacted the nationalisation of mineral rights ownership (Capps, 2012). The aim was to facilitate the transfer of a quarter of ownership of mining houses to black elites (Capps & Mnwana, 2015). This nationalisation of mineral rights changed the system of property rights in mining insofar as it undermined the viability of mining incumbents at the time. This historical moment was the ANC's attempt to begin building a black business class that would ideologically be the patriotic drivers of industry (Nxele, 2022).

The nationalisation of mining rights, however, created different forms of expropriation threats in the present and future. Within the ANC there was a big debate about (and a move towards) the nationalisation of mining assets leading up to its 2012 conference. There have been several other issues such as the "once empowered, always empowered" problem, topical since 2014 when the government pushed for further rounds of black empowerment in the industry for companies whose BEE partners had cashed out of deals. This departure would render incumbent firms non-compliant, necessitating further dilution of existing shareholders, thereby exacerbating uncertainty within the sector.¹⁹ Overall, the question of variants of expropriation transmitted through rules remains a real threat to business, particularly in light of the persisting political challenge of deeply entrenched, racially rooted inequality within the private sector.

The micro-level cases explore how each of the I-firms managed expropriation risks in their relations with government. All the I-firms studied had to engage with government while negotiating the security of tenure of their properties. What kind of deals were concluded with government that signalled cooperation and managed the risk of expropriation? Finally, the nano level cases include partnerships and deals at specific mines. These are sources of variation within I-firms, and between BEE partnerships in the platinum industry. Ultimately, the main outcome

¹⁹ This issue is discussed further in Chapter 11.

variables of interests are tangible shaft-sinking investments, and tangible transformation in the form of productive black owned enterprises.

1.2. The problem necessitating elite transformation in South Africa

In South Africa, elite transformation (and more broadly, racial class transformation) is imperative because the democratic political transition did not inherently dismantle profound, racially rooted economic inequality. The ownership of the commanding heights of the economy has remained overwhelmingly with the white economic leadership.²⁰ Conversely, the political leadership stems from a historically disadvantaged background, and represents a constituency of historically oppressed black people, constituting approximately 80 per cent of the population.

The South African Presidency described this disjuncture as follows.

One of South Africa's characteristics ... is the fact that the political leadership in government is quite distinct in terms of race, culture, background and lifestyle from the economic leadership. This has had some benefit in that the political leadership is not beholden to an established "Old Boys Club". The disadvantage is that the kind of trust needed between the economic and political "elites" for high levels of investment was missing post-1994 South Africa (The Presidency, 2003: 111).

While the ownership status quo was a recipe for later political conflict and instability, efforts to transform it risked unleashing destabilising influences of their own. There was the risk of uncertainty regarding future prospects of a kind which could undercut private investment (Tangri & Southall, 2008), and that, as political leaders and their allies jockeyed for access to economic assets, the discretionary use of political power could become the order of the day, weakening state institutions more broadly" (Hirsch & Levy, 2018: 22).

Several contributions in the literature suggest that economic growth creates the conditions within which transformation is possible without this "jockeying for access to assets" in ways that undermine investment (Mbeki, 2009; Turok, 2016; Jonas, 2018). However, economic growth, by itself, is unlikely to transform racial economic inequality. Deputy Minister of Finance

²⁰ Overtime, the composition of "white economic leadership" has changed in South Africa. This is due to the unbundling of several large conglomerates in the late 1990s, and due to the increasing ownership of firms by institutional investors. This contemporary trend of ownership patterns is discussed in Chapter 11 and included as planned post-doctoral research output in Chapter 14.

between 2014 and 2016, Mcebisi Jonas, argues that economic growth without transformation will

...reproduce and exacerbate inequalities which will make growth unsustainable. Transformation without net growth in investment and output will see unemployment and poverty increase and will over time reduce the fiscal redistribution capacity of the state. Reduced wealth will also increase elite conflict, making consensus more difficult to manage (Jonas, 2018: 15).

The degree to which economic growth is inclusive matters, especially in the case of highly unequal South Africa.

Faced with the imperative for direct state involvement to create a black capitalist class, the ANC-led government initiated a process of formalising empowerment deals by creating an official policy and legislation that aimed to develop and manage black economic empowerment in a programmatic manner (Freund, 2007; Levy, Hirsch, Naidoo, and Nxele, 2021). As noted by Freund, the state would supposedly be developmental insofar as it envisaged the emergence of a developmentally oriented elite, which would “straddle the boundaries between the management ranks in the private sector, [and] the established bureaucracy and politicians” (Freund, 2007: 663). Thus, the ANC – particularly its leader Thabo Mbeki²¹ who led the transformation project from its inception – initially envisioned that this black business class as productive, complementing the state’s pursuit of economic growth and development (IOL, 1999; Gumede, 2007).

Strong backing for the "disciplining" aspect of the transformation agenda shifted to a dwindling support for proactive elements promoting global competitiveness (Hirsch & Levy, 2018). Nxele (2021) observed the absence of inherent logic in BEE for wealth creation and capability nurturing, with no requisites for aligning productive enterprises with effective industrial policy (Sen, 2015). Conversely, the transformation agenda stressed rules for consumerist equity transfers, yielding limited developmental benefits.²² The assumption was compliance and ongoing investment would foster progressive restructuring, led by productive black enterprises. Focusing on more rules, there was hope for transformation (Pityana, 2015). Instead, this bred uncertainty from economic-government policy disputes and unpredictable rule changes. Insider

²¹ Thabo Mbeki was deputy president of South Africa from 1994 and was president from 1999 until 2008.

²² The Black Economic Empowerment Act (of 2003) contains rules that not only deal with ownership, but also with racial representation at different levels of management, and other affirmative action rules. The focus of the present study is on elite deals: these mainly focus on the question of ownership, and secondarily on board representation.

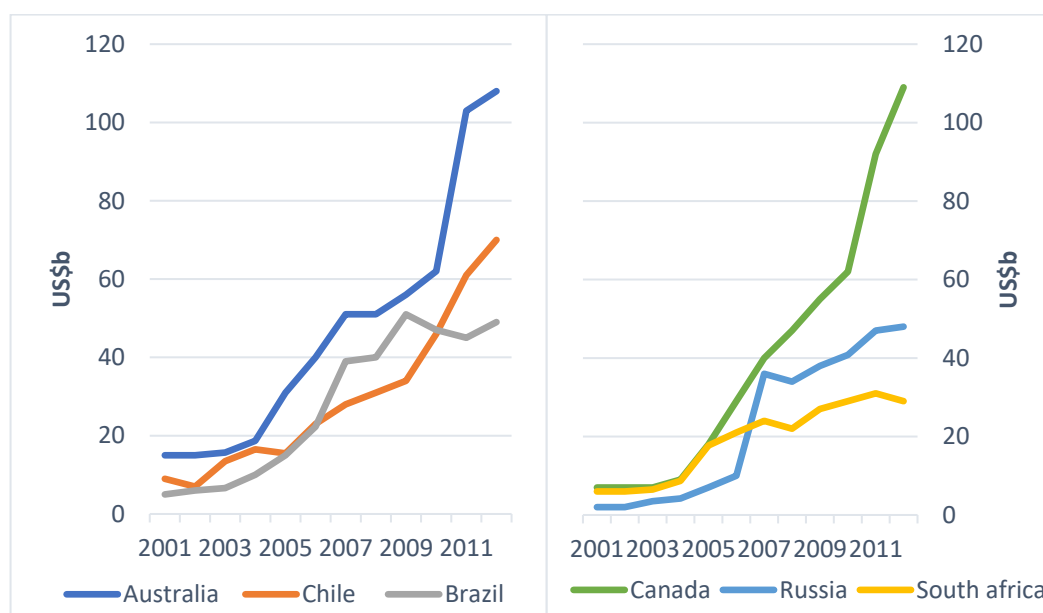
elites spurred collusive deals. Instead of nurturing productivity, South Africa's economy stagnated, and counter-productive forces surged (Hirsch & Levy, 2018).

The racial class transformation project consequently did not coincide with good-enough growth in investment (discussed below), because there was no sufficiently robust pact between the political elite and economic elite to collaborate on a set of mutually beneficial initiatives that would inject dynamism and growth over the medium to long term. This PhD departs from the “more rules” approach thus far pursued in South Africa. The hypothesis of this study is that in such an environment, the way forward is not merely crafting more rules, but complementing South Africa’s “good-enough” framework of rules by crafting good deals. This study will demonstrate that good deals can establish and sustain credible commitment around a set of investments, with better chances of creating black owned productive enterprises.

1.3. Investment and the commitment problem in mining

In the mining sector, the economic impact of elite transformation has been evident. The introduction of BEE led to a significant outcome: “between 2001 and 2008, the longest sustained commodity boom in recent history, South Africa’s mining industry [GDP] contracted at a rate of 1% per year, while its closest competitors grew at an average rate of 5% per year” (Rossouw & Baxter, 2011: 511). This poor outcome happened despite a 2010 valuation by Citigroup of South Africa’s proven mineral resource wealth at US\$2.5 trillion, the largest in the world. Comparable countries, ranked by descending mineral value, are Russia (US\$1.65 trillion), Australia (US\$1.6 trillion), Canada (US\$1 trillion), Brazil (US\$0.70 trillion), China (US\$0.68 trillion), and Chile (US\$0.65 trillion) (Mintek & Jones, 2017).

Figure 2 – Mineral investment projects in major mining countries, 2001-2012



Source: Nedbank Group Economic Unit (2017)

Figure 2 shows that during the commodity price boom between 2001 and 2012, South Africa failed to attract investment projects proportional to its mineral value size and diversity of mineral resources. This underperformance in investment directly explains the annual average contraction in mining’s contribution to GDP.

The process of converting “old order” to “new order” mineral rights proved to be rife with ambiguity and scope for ministerial discretion as to what entailed a BEE-compliant conversion. This had direct implications for investment. Transactions in mining happen over many years, and face the inherent risk of opportunistic behaviour to expropriate (North, 1981). This dilemma describes the basic problem which Vernon (1971) called the “obsolescing bargain” , or the “credible commitment” problem (North, 1981; Haber, Razo & Maurer, 2003). The more an investor sinks capital in developing or expanding a mine, the more the investor becomes captive to the government. Government, in turn, has discretion in policymaking, even in the context of a relatively robust universal rule of law.

Every investor could comply with the rules – and indeed there was compliance with the rules – but solving the credible commitment problem boiled down to deals: the quality of the deals over time in a multi-rounds game of BEE. Thus, even if it is true that “South Africa missed the commodity boom”, this still does not account for the variation in performance at the firm and mine level.

CHAPTER 2 Theoretical framework of the political economy of private irreversible investment and elite transformation

This chapter adopts the multi-level framework introduced in Chapter 1 to develop the theoretical framework.

2.1. Mega theory: Fixed capital accumulation and credible commitment

The rate of investment has been documented in the literature as a core determinant of long-run economic growth (Fedderke, 2005). Relevant theory includes Solow (1956) and Romer (1986, 1990). Empirical research confirms the centrality of the investment rate in physical capital as the key engine of long-run gains in per capita real output (Levine & Renelt, 1992; Fedderke, 2004, 2005).

There are several drivers of investment in general, and in South Africa. These include stability of property rights, real GDP growth, increases in government investment, improvements in financial intermediation, rule of law, and infrastructure (Wai & Wong, 1982; Porter & Stern, 2001; Fedderke & Luiz, 2008). In addition, the modern theory of capital expenditure has focused on the impact of irreversibility and uncertainty (Abel & Eberly, 1999; Carruth, Dickerson & Henley, 2000; Arve, 2016). Irreversibility is a prominent feature of mining investment, which, combined with incomplete contracting, creates a pronounced credible commitment problem. The problem is that sunk mining investment creates *ex post* quasi-rents (or returns) that require protection through *ex ante* contracting.²³ Unless complete and enforceable contracts are available, opportunists such as government or other powerful actors may appropriate the sunk investment (Rodrik & Zeckhauser, 1988; Rodrik, 2000; Wells, 2003). This problem of appropriability as relating to government opportunism or other political actors, in a partial-equilibrium setting (i.e., mining sector, *ceteris paribus*), leads to underinvestment in mining (Caballero & Hammour, 1996). The contracting problem is a micro and nano economic problem and will be outlined more carefully below.

²³ *Ex-post* is another word for actual returns and is Latin for "after the fact."

Fedderke and Luiz (2005) develop a theoretical model of a firm's decision to invest under uncertainty and irreversibility. The authors show that the firm will actively try to influence the variables and parameters that reduce uncertainty. Empirically, the authors find that net change in investment depends on a firm's ability to reduce the frictions associated with uncertainty. Building on the above literature, this PhD will argue that the net change in investment will depend on the extent to which "good deals" outnumber "bad deals" both in number of deals and size of absolute investment. The variance in deal quality translates to varying degrees of managing uncertainty. Consequently, the study's methodology centres on systematically accumulating and analytically tracing deals and their associated investments over time.

2.2. Macro theory: Political settlements, personalised institutions, and credible commitment

Investment and the dynamics of elite transformation unfold within specific institutional and political structures. These configurations hold significance in shaping elite incentives and steering diverse developmental pathways (Kelsall et al., 2022). At a country level, constructing a framework to explore the interplay among elites and their subsequent decisions on policy, investment, and transformation demands the synthesis of conceptual paradigms encompassing political settlements, institutions, rents, rent-seeking, and credible commitment. This confluence forms a typological framework encompassing varying contexts, incentives, and rent distribution (See Levy, 2014).²⁴ Following North, Wallis and Weingast (2009) and Levy (2014), this study concentrates on the interplay between power and institutions, which creates distinct environments for micro and nano-level deals.

According to Acemoglu, Johnson & Robinson (2005), institutions can generally be split between economic institutions and political institutions. Economic institutions determine the incentives of and the constraints on economic actors, and shape economic outcomes. Because different

²⁴ There is a distinction between power and institutions (Kelsall & vom Hau, 2020). Kelsall et al. (2022) give detailed attention to the "power" aspects of political settlements. (Their work clarifies this distinction through questions such as: How broad is the social foundation of "insider" interests? How coherent is the exercise of power?). The theory of political settlements frames this work precisely because it surfaces the role of politics, enables a clear reading and application of the social foundations of societies (whether they are mainly elitist or participatory inclusive), and whether power is concentrated or dispersed, and among which actors or groups power is located, how much of that power, and how this might translate to rent appropriation and distribution. While the present formulation of the theoretical framework builds on earlier work in the literature, it is heavily guided by the thinking and logic of political settlements. Therefore, the theoretical framework in this work, and the empirical work, goes beyond the role of institutions to the role of power relations, but mainly within the narrow inter-elite sphere.

groups and individuals typically benefit from different economic institutions, there is generally a conflict over choices of economic institutions, ultimately resolved in favour of groups with greater political power. The distribution of political power in society is in turn determined by political institutions and the distribution of resources. Political institutions allocate *de jure* political power, while groups with greater economic wherewithal typically possess greater *de facto* political power (Acemoglu, Johnson & Robinson, 2005). The latter is often essential for the determination of economic policies and the distribution of economic resources (Williamson, 1994; Acemoglu & Robinson, 2008). Therefore, Acemoglu and Robinson argue, changes in political institutions do not necessarily lead to changes in economic institutions. In practice, elites invest in *de facto* political influence, ensuring economic institutions endure despite political shifts (Amsden, DiCaprio & Robinson, 2012).

In what political context, or social order, does this bargaining take place between economic and political actors? North, Wallis & Weingast (2009) characterise developing countries as limited access orders (LAOs), where insider elites maintain rents and limit access to competing outsider organisations. The system not only permits rent seeking but requires it: “Limiting the ability to form contractual organisations only to members of the coalition ties the interests of powerful elites directly to the survival of the coalition, thus ensuring their continued cooperation within the coalition” (p. 17). The success of cooperation is predicated on internal balance of interests – what they call the double balance – between political power and economic power. This stability, or peace, is engendered through the creation of rents. In South Africa's instance, the coalition between powerful political actors and powerful economic actors exemplifies this double balance.²⁵

Moreover, LAOs are characterised by personal relationships, who one is and who one knows. This forms the basis of social organisation and constitutes the arena for individual interaction, particularly personal relationships among powerful individuals (North, Wallis & Weingast, 2009: 13). This personalised elite order becomes the basis of deal-making to secure property rights. Put differently, property rights can be specified and enforced as private goods. As

²⁵ The LAO framework has its limitations, which are addressed by the literature on political settlements, such as Khan, 2010; Kelsall, 2013; an Kelsall et al., 2022. A recent example of the limitation of the LAO framework is Ethiopia, where credible selective enforcement of property rights commitments (for national and international investors) helped stoke political upheaval because of the failure to enforce property rights commitments to non-elites (and at least where the ability of rival elites to threaten the prevailing political settlement owed a lot to their links to wider non-elites). Therefore, the approach is applied because of its power to surface the role of elite bargains, which are directly useful for a study on elite transformation. This is only part of the story, as exemplified by the Ethiopian example.

summarised by Levy: "...property rights are not necessarily a public good, dependent on the full panoply of a justice system. Rather, they can be constructed in an *ad hoc*, targeted way – that is, they can be “privatised” (Levy, 2014: 184). Haber et al. (2003), in study of early twentieth century Mexico, argue that “the government...will only enforce [selected property] rights when it is in its interest to do so” (Haber, Razo & Maurer, 2003: 18). This argument by Haber et al. (2003) is based on the following four assumptions:

- Rather than provide universal enforcement of property rights, governments may *selectively enforce* property rights as a private good to specified groups, or may manipulate the level of enforcement to fit their needs
- Asset holders do not demand that the government protect everyone’s property rights. Instead, asset holders care primarily about their own property rights
- Asset holders do not make binary choices between production and no production. They will tolerate a certain level of predation risk provided there is some positive level of profits in compensation
- There exist information asymmetries, as the private sector cannot perfectly monitor the impact of government’s actions on their property rights

The argument by Haber et al. (2003) provides one way of privatising pockets of property rights that may provide a platform for economic activity in a weak governance setting. Crafting political deals with powerful actors can provide a “good-enough” basis for securing property rights and investment, as is the case in early twentieth century Mexico. Haber et al.’s analysis of political level deals for the purpose of securing property rights will be instructive for this study.

Contrary to early twentieth century Mexico, South Africa is not characterised by weak governance but is largely characterised by an enforceable specification of *de jure* property rights. However, although the universal rule of law is important and helpful, it does not preclude government discretion in formulating and altering rules affecting property rights security. This discretion creates the *ex post* risk: once investors adhere to all rules, what ensures against rule changes rendering them non-compliant? This *ex post* risk, in the case of South Africa, arises within a personalised political settlement, where identities of the political leadership matter for protection against adverse actions of government. Here, the Haber et al. (2003) rationale aligns with South Africa; amid residual political uncertainty due to rules as incomplete contracts. There remains space for crafting investment-oriented deals that underpin credible commitment.

This PhD argues that even in the South African context with its strong rule of law, there remains *ex post* risk that the elaborate *de jure* rules framework does not resolve. To complement this framework of rules, political-corporate level deals that signal cooperation with the objectives of the political leadership help to build the confidence of asset holders.²⁶ However, even this level of political deals may be insufficient to eliminate opportunism. Therefore, a second level of deals that arises directly from the existence of a robust rule of law are deals at the asset level with politically influential partners. Getting closer to a state of “a complete contract” requires asset-level deals that combine the commercial interests of investors with those of the politically connected entrant class.

Having established a distinction at the levels of deals, a further step is that deals can vary in the extent to which they deliver credible commitment, and whether such deals are compatible with social goals such as transformation or are predatory. In other words, it is not just about closing a deal, but about crafting good deals. Good political-corporate level deals lean towards cooperating on investment and transformation. Good deals at asset level involve a process of seeking “good” partners and entering into collaborative, risk-sharing deals. As argued by Williamson (1999), ultimately the mechanisms of cooperation rely on careful processes of crafting these arrangements, with the courts as a last resort.

Finally, having built a country-level theoretical framework that evokes the arena of action within which elite bargaining takes place, these “bargainings” can lead to different development trajectories that are either compatible with growth and development, or lead to stagnation. The outcome depends on the nature of the process of rent-seeking whereby resources are spent to secure economic rights that underpin rents. Khan & Jomo’s (2000) study of Malaysia’s racial elite transformation argues that the country’s development story has involved a mix of value-enhancing and value-reducing rents.²⁷ Government intervention to redistribute wealth and create new opportunities for wealth accumulation produced a mixed corporate sector. There was a type of rentier-elite specialised in appropriating rents without any real production, while another type of rentier-elite which, though politically connected and economically powerful, was competent in production. The new Malay business community, in turn, includes a mix of those who have

²⁶ Indeed, this feature is arguably applicable to the rest of South Africa’s economy during this period (Fine & Rustomjee, 2019).

²⁷ The PhD proposal included an overview of the Malaysian case. Due to word-count constraints, this overview was excluded.

since developed independence from the state (towards market competition), and those who continue to cultivate and rely on political connections.

The above framework therefore sets up the contextual “arena of action” and its parameters. It explains how, theoretically, different paths of accumulation strategy can lead to a set of robust bargains compatible with investment or can follow the path of stagnation or collapse. The paths taken are crafted or chosen systematically by the type of capital (patient versus predatory). But what might be these corporate strategies at the sector or company level, and what might individual level partnerships and deals look like? The next two subsections build on the mega and macro framework to construct a micro-nano framework to be operationalised in this research study.

2.3. Meso-Micro theory: Corporate strategies for credible commitment and investment in an evolving transformation landscape

“It is the corporate actors, the organisations that draw their power from persons and employ that power to corporate ends, that are the primary actors in the social structure of modern society” - Coleman, 1974, p. 49; in North, Wallis, & Weingast, 2009:1

The South African economic structure in the 1990s was characterised by oligopolies: large conglomerates with significant power in the country. Each company needed to craft corporate responses to the newly installed political ruling party, which itself contained prominent personalities or insiders and, over time, factions. King et al., (2015) argue that the transition created a legitimisation process to which corporate entities responded through variants of isomorphism. Isomorphism entails the restructuring of companies to attain legitimacy with the state, the new global corporate world, and society. Coercive isomorphism occurs when corporates make decisions driven by political pressure; decisions such as restructuring to accommodate black partners (Scott, 2013; King et al., 2015).²⁸ When corporates mainly respond to uncertainty and restructure to look like other legitimate corporations in the new institutional environment, they engage in mimetic isomorphism (Scott, 2013; King et al., 2015).²⁹

This research adopts and extends this conceptual framework by distinguishing between isomorphism and transformation. This study defines transformation as the process of building

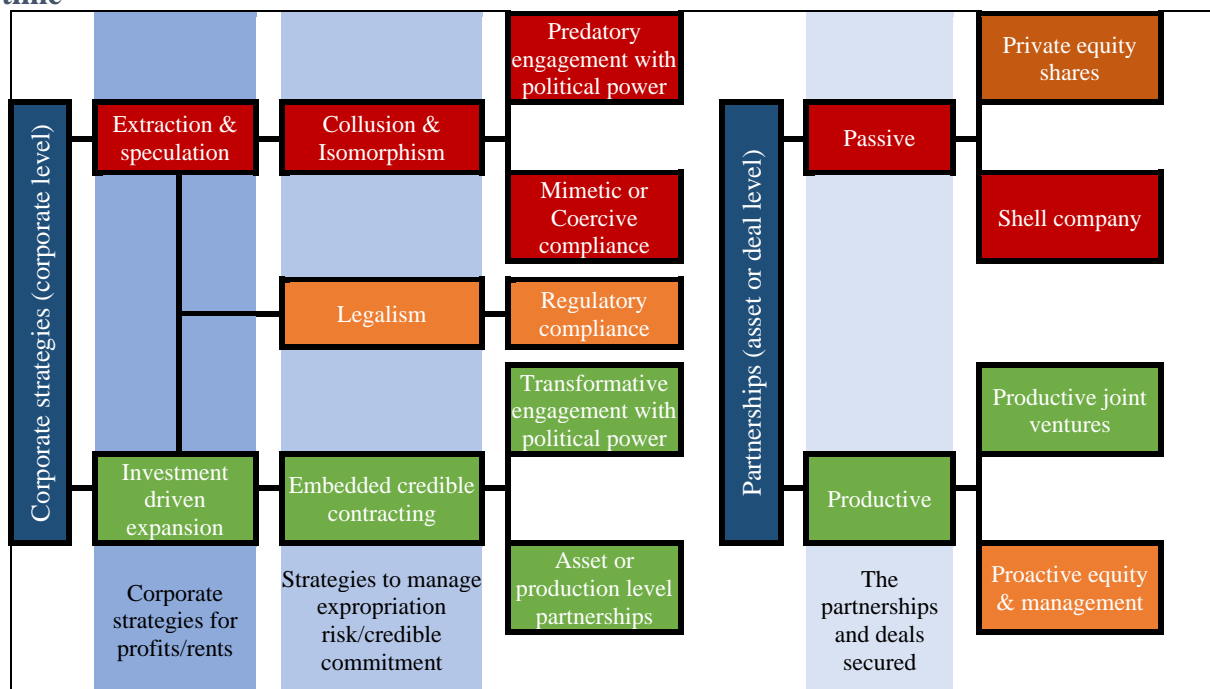
²⁸ “Coercive isomorphism relates to formal and informal pressures as a result of the legal and cultural expectations of the society in which an organisation operates that influence organisational behaviour and structure” (King et al., 2015: 339–340).

²⁹ “Mimetic isomorphism results from organisations modelling themselves on other organisations when there is environmental uncertainty. This relates to the cognitive legitimacy of comparable organisations providing templates for what is acceptable”(King et al., 2015: 340).

racially inclusive productive economic opportunities. This definition is consistent with the National Treasury’s definition of transformation as a process that creates new resources and mobilises investment (National Treasury of South Africa, 2017:1). Unlike isomorphism, a reactive process of compliance or “fronting”, transformation is proactive and internalises and/or institutionalises socio-economic redress in the corporate strategy and production process.³⁰

The distinctions described above provide a typology that broadly differentiates between firms in terms of their (1) corporate strategies for appropriating rents or profits, and (2) strategies for managing expropriation risk. As we will see, these differences matter in terms of whether the elite transformation game unfolds into investment and racially changing productive activity or becomes largely a game of rent-seeking collusive deals with little investment and transformation.

Figure 3 – TYPOLOGY A: Variation of Corporate strategies and partnerships through time



Source: Author

Note: As discussed in the preceding section, the above diagramme is embedded in a political and institutional environment.

Figure 3 (TYPOLOGY A) captures the typology of corporate strategies that are available to I-firms and lead to distinct or divergent trajectories. An I-firm has a corporate strategy for maximising profits/rents either through investment-driven expansion, or through extraction and

³⁰ “Fronting means a deliberate circumvention or attempted circumvention of the B-BBEE Act and the Codes. Fronting commonly involves reliance on data or claims of compliance based on misrepresentations of facts, whether made by the party claiming compliance or by any other person” (Department of Trade and Industry, n.d.).

speculation.³¹ On the basis of that overarching strategy, I-firms craft their own approaches to manage expropriation risk.

- (a) Investment-driven I-firms (patient by orientation) will craft engagements that resolve the commitment problem through “embedded credible contracting”, and by implanting themselves in the changing political economy. This means undertaking both transformative engagement with political power and asset specific partnerships. A focus limited to engagement with the political class would make the deal vulnerable to factional changes, as described by Pritchett, Sen and Werker (2017) (See next section). A focus limited to asset level partnerships may result in sufficiently stable deals for those assets in the context of a “good enough” rule of law, but not for broader expansion that requires a proactive signal of cooperation. As Section B (Chapters 5 and 6) will show, the empirical case of a patient, investment-driven firm is Amplats.
- (b) Extraction and speculative I-firms (predatory by orientation) will resort to collusive political level deals and mimetic or coercive isomorphism in relation to rules.
 - a. Collusive political deals essentially evade the imperative of investment and transformation by locking into personalised rent-seeking deals with equally opportunistic insider members of a political party or such similar arrangements. In terms of managing BEE rules, the predatory I-firm resorts to mimetic isomorphism at worst, and coercive isomorphism at best.
 - b. Mimetic isomorphism mainly involves fronting – crafting ways to look transformed – and can entail almost a complete evasion of rules. This method does not require restructuring, because “window dressing” is sufficient and is linked to co-opted political principals or government officials.
 - c. Coercive isomorphism is a corporate response of restructuring a business disingenuously to meet requirements technically, but not genuinely. This is “artful engineering”. As will be detailed in Section C (Chapter 7 and 8) an empirical case of this kind of I-firm is Lonmin, which split itself into two parts. Three quarters of itself was named Lonmin (the I-firm). One quarter of itself was named Incwala, supposedly the BEE partner. It then “bought” a substantial share of Incwala, and co-opted BEE beneficiaries to be part of Incwala. On paper, this

³¹ Extraction and speculation of the kind referred to by the literature as opportunistic and value-reducing (Khan & Jomo, 2000; Acemoglu & Robinson, 2008). For discussion on the rise of speculative activity (at the cost of productive activity) in South Africa, see (Karwowski, 2015, 2016).

method met the rules and Lonmin was internationally acclaimed for its transformation.

There is a third, “middle” route that an I-firm can take, which this study calls “legalism”. This is an inferior route to take for the investment driven I-firm, but improves on the predatory I-firm.

- (c) Legalism is a corporate response that focuses on regulatory compliance. The I-firm focuses only on the rules on paper and undertakes a tick-box exercise to manage expropriation risk.³²

Legalism or rule compliance is insufficient because rules are incomplete contracts, which are neither self-formulating, self-determining, nor self-enforcing (Ostrom, 2005). Ordinarily, investors would seek to influence this process to protect their investments, for example, by striking deals. The stability of rule-ordered relationships depends upon enforcement. Because enforcement is a moving target, there remains a gap to structure relationships around specific assets or transactions for mutual gain (i.e., deals). Transaction costs economics supports this conclusion.³³

In summary, farsighted patient capital will respond transformatively through good deals with political power and like-minded business BEE partners at asset level. The middle range on the capital spectrum is an incumbent which, though investment driven, is unable to figure out the deals environment and focuses on regulatory compliance as sufficient to keep predation at bay. Finally, predatory capital can only respond collusively and isomorphically.

The expected outcomes of these corporate strategies (a, b, and c) are as follows:

(i) Collusion and isomorphism route

- a. Unstable/vulnerable deals.
- b. The unstable deals are a function of changing political factions and opportunistic BEE partners; intentionally or unintentionally, the I-firm is likely to attract opportunistic partners.

³² An empirical example is Gold Fields South Africa (Northam). As noted in Chapter 1 by footnote, the case study was omitted in consideration of the number of words of the PhD, reserved as a post-PhD publication.

³³ Transaction cost economics concedes that comprehensive contracting is not a feasible option (by reason of bounded rationality), yet it maintains that many economic agents have the capacities both to learn and to look ahead, perceive hazards, and factor these back into the contractual relation, and thereafter to devise responsive institutions. In effect, transaction cost economics emphasises private ordering over legal centralism, and thus pushes contract law into the institutional background (Williamson, 1999; Ostrom, 2005).

- c. Therefore, the result is likely a non-sustainable BEE trajectory, that may become a predatory BEE trajectory, e.g., abusing state resources in the name of black empowerment.
 - d. As a result, there will be low investment and poor transformation outcomes.
- (ii) **Transformative route**
- a. Stable robust deals.
 - b. The stable deals are a function of a good political-corporate deal that supports the aims of transformation, and are a function of good partners at asset levels, i.e., patient E-firms.
 - c. Outcomes are likely to be (1) thriving or (2) good enough for credible commitment.
 - d. This is a path of durable transformation.
- (iii) **Rules compliance route**
- a. Retaining reputation of illegitimacy.
 - b. In the eyes of political leadership, rule compliance remains ever incomplete.
 - c. There are risks of co-opting opportunistic partners to comply with BEE, because of lack of interest in managing transformation as a long-term, credibility-building opportunity.
 - d. The result is unresolved expropriation risk and below-potential investment, if not low investment.

In sum, Typology A generates theoretical characterisations or classifications of capital. It also generates behaviours that spring from this characterisation. Typology B in Section 2.4.3 below generates theoretical outcomes at the deal level. Before introducing Typology B, it is necessary to complete the framework by introducing the BEE-partners (the E-firms).

2.4. Micro-nano theory: Variation in quality of deals and partnerships

“Contracts are meant to enshrine agreements in something like stone. But contracts covering long-term infrastructure investments in emerging markets are written in something closer to sand.”(Orr, 2006)

The meso-micro level of the theoretical framework generated empirically leverageable I-firm corporate strategies to managing expropriation risk, with Typology A as a key output. The task at the micro level is to concretise the characterisation of the players and deals in empirically researchable ways.

2.4.1. The capital spectrum and associated incentives

Capital is not homogenous. Pritchett, Sen & Werker (2017) categorise capital according to source of profits and degree of market competition.³⁴ The present work goes further by postulating that capitalists (incumbents and entrants) are not homogenous. There are *ex-ante* characteristics that shape the behaviour of investors.³⁵ This behaviour varies along the patient-predatory capital spectrum³⁶.

In their review in 2011 of South Africa's *mining* sector, Pwc summarised patient capital as follows: "Patient capital drives [its] decision making process by looking beyond quick financial returns to a more holistic return across a longer period of time" (Pwc, 2011). South Africa's National Treasury recognises the role of patient capital. Its study of economic transformation in South Africa repeatedly emphasises the need for patient rather than speculative short-term capital(ists) (National Treasury, 2019).

Following a review of the literature and drawing on the author's experience of working with mining companies as an investment banker, the following crystallises the characterisation of patient capital in mining on the patient-predatory spectrum. These characteristics are used to build the capital spectrum instrument. It is important to note that the characteristics of patient capital in mining are drawn from the literature, and in later chapters companies will be placed along the capital spectrum by studying the companies over time and rated according to the capital spectrum instrument.³⁷ See Table 2 below.

Incentives or behaviour of patient capital in mining

Patient capital behaves in the following ways:

1. Engages with the political leadership with a shared objective of transformation (Hirsch & Levy, 2018).

³⁴ The authors build a typology that categorises capital as follows. "Rentiers" and "magicians" target the export market, but rentiers are natural resource firms, while magicians operate in competitive markets. "Powerbrokers" and "workhorses" are domestically oriented, but powerbrokers operate in regulated industries, while workhorses rely on competition.

³⁵ First, in relation to Pritchett, Sen & Werker (2017)'s work, this means that even rentiers are not homogenous, but differ along the capital spectrum. Second, the idea of different types of partners or entrepreneurs already exists in the literature (Foss et al., 2002; Calza & Goedhuys, 2016).

³⁶ The heterogeneity of entrepreneurs on the basis of their patience has been explored in literature; for example, Uras (2013) and Ivashina & Lerner, (2019).

³⁷ This should alleviate concerns about "tautology" bias.

2. Wants to own and manage mining operations and takes on the full risks of production and competition. The focus is on fixed investment, production and skills (Morris, Kaplinsky & Kaplan, 2012; Christianson, 2017a).
3. Invests in *exploration* and *mine development*, and/or seeks joint ventures to develop this pipeline of projects. Appetite for exploration shows farsighted interests and plans to expand locally (De Beers, 2016).
4. Creates a pipeline of fixed investment projects (expansions, new mines) (Deloitte, 2020).
5. Invests in infrastructure (Deloitte, 2020).
6. Invests in some manufacturing activity, such as smelting and refining operations (Deloitte, 2020).
7. Cultivates long-term supply relationships with customers (Raymond, Wilson & Clifford, 2020).
8. Deploys its own balance sheet capital to domestic investment (Ivashina & Lerner, 2019).
9. In its corporate strategy, it sits above political factions. Investment plans are not significantly sensitive or shaped by factional politics within the ANC (Nxele, 2022).
10. Deals with commodity busts by restructuring and protecting investment, rather than disinvesting (Deloitte, 2020).
11. The majority of revenue comes from sales of produced goods and services, rather than a balance sheet of speculative activity.

The above provides the basis for a capital spectrum that can be deployed to characterise a firm as patient or predatory through a system of scoring. In Table 2, the maximum score a firm can achieve is 27 points. The extreme on the predatory end is zero points. This method of building a spectrum, though informed by literature, has its limitations of subjectivity and can be susceptible to confirmation bias. The hope is that the analytic narratives of the firms in Sections B to D will enable readers to apply their own judgement.

Table 2 – INSTRUMENT 1 – The patient-predatory capital spectrum

Attributes	Company types			
	Patient/Producer company (<i>far-sighted</i>)*	Investment-holding company	Opportunistic	Predatory
<i>Incentives or behaviour</i>				
Transformative engagement with political power	+++	++	+	0
Focus is on fixed investment, production, and skills	+++	++	+	0
Patient capital invests in exploration and mine development	+++	++	+	0
Patient capital creates a pipeline of fixed investment projects	+++	++	+	0
Patient capital seeks patient JV partners	+++	++	+	0
Patient capital seeks long-term production-based deals with partners	+++	++	+	0
Patient capital deploys its own balance sheet capital to domestic investment	+++	++	+	0
Patient capital, or its corporate strategy, sits above political factions	+++	++	+	0
Majority of revenue comes from sales of produced goods and services	+++	++	+	0
Maximum score	27	18	9	0

Source: Author

Table 2 (Instrument 1) captures the characteristics of capital that would apply not only to I-firms, but to E-firms as well, but more is needed to describe E-firms. Entrants or E-firms enter the game not necessarily as companies with corporate strategies, but as individuals or consortia of individuals with objectives and *ex-ante* characteristics, as follows.

A. General objectives

- (a) Wealth accumulation

B. Differentiating objectives

- (a) Pursue quick cash through asset stripping, or
- (b) Pursue quick cash through securing mineral rights for bartering, or
- (c) Build a thriving investment-holding business, or
- (d) Build a thriving, mining operating business enterprise

Various BEE actors will weigh these objectives differently. While all entrants seek to accumulate wealth, their objectives in relation to development policy will differ.³⁸

³⁸ Additional salient *ex-ante* characteristics of BEE partners include (1) the extent to which a BEE partner is connected to ANC political factions, (2) the extent to which a BEE partner has some general business experience, and (3) the extent to which a BEE partner has some mining experience. These characteristics matter because the more the BEE partner desires genuine entrepreneurial involvement and upgrading, the better the chances of evolving towards the patient end of the capital spectrum.

Taking the proposition that capitalists vary along a patient-predatory spectrum, the next proposition (flowing from Typology A) is that each I-firm will play the BEE game by either (1) concluding political-corporate level deals, and/or (2) concluding asset level deals, and/or (3) going through a mere rules-compliance exercise. This necessitates building two further instruments to characterise the two-level deals, outlined in the following subsections.

2.4.2. Corporate-level deals: Transformative versus collusive corporate-political level deals

What is a transformative corporate-political deal (or I-firm-government deal), how does it differ from a collusive deal, and how can this study distinguish them? This subsection accounts theoretically for the variation of corporate-political level deals. The output will be an instrument that can be deployed to generate results that one may analyse using Typology A.

In general, corporate-political level deals are transformative or collusive (per Typology A). Both types are about being close to the state. Which type is concluded heavily depends on the time horizon of capital. Several scholars assert that when productive entrepreneurs form close relations with the ruling elite on the basis of mutual productive interest, relations are likely to enhance growth (Abdel-Latif and Schmitz 2010; Whitfield and Therkildsen 2011, in Sen 2015; Maxfield and Schneider 1997; Khan 2010). Indeed, the literature attributes variation in development success in the developing world to the extent to which countries or sectors build “growth coalitions” as opposed to “collusive coalitions” (Sen, 2013, 2015).³⁹ Corporate-level deals can also evolve over time, depending on the orientation of the economic and political leadership.

The apex political leader's role is crucial. Beyond the written rules, does the *de facto* definition of transformation sought by the political leadership foster transformative deals or does it invite collusive deals? While a political party will have mixed “insiders” with varying intentions, the apex leader might influence this balance. Broadly, the ideology of key political actors, and whether they communicate a vision of growth oriented policies among rival political parties matters more than the type of political regime (Leftwich 2009, in Sen 2015). As such, if the type of faction leading government is predatory, it is possible that it would devise ways to predate over business.

³⁹ Sen (2015) cites examples of growth coalitions in Botswana, Ghana, and Mauritius.

This suggests that the *de facto* definition of transformation might change depending on which leader or faction is ruling. Possible objectives of the political leader or leadership in relation to transformation might consist of the following in relation to the mining industry:

1. Investment in mining
2. Favourable rent-sharing arrangements (limiting share of rents that go to big capital)
3. Fostering emergence of new, black capitalist class
4. Other political alliance and/or self-enrichment objectives

Sen (2015) emphasises that “the long-term commitment of ruling elites to stable informal relations with economic actors is a precondition for collaborative state-business relations” (p. 15). Change in the political leadership (at political party level) along with a change in preference of transformative versus collusive deals is thus likely to influence which types of entrant elite enter the BEE deals game when leadership or factional changes occur.

The description of transformative versus collusive deals below develops an instrument (Instrument 2) to classify corporate-political level deals along the transformative-collusive spectrum.⁴⁰

Table 3 – INSTRUMENT 2: The corporate-political deal spectrum

	Transformative deal	Score range (0-3)	Collusive deal	Score range (-3-0)	No deal	Full score
i	Unlocking/unbundling assets for resourcing BEE	0 to 3	Closed party-funding focused deals	-3 to 0	No deal	0
ii	Commitment to continuing investment	0 to 3	Rent-sharing arrangements, no commitment to investment	-3 to 0	No deal	0
iii	Commitment to racially transforming company	0 to 3	Isomorphism tactics rather than transformation	-3 to 0	No deal	0
	Total score	9		-9		0

Source: Author

Instrument 2 is a corporate-political deals spectrum that can be deployed empirically. Using the research methods of analytic narratives and process tracing outlined in Chapter 3, this instrument provides a basis for assessing whether firms pursue a deal with the state, and if so, whether the deal leans towards the transformative or collusive side. A deal can score a maximum of nine points if it is transformative, and negative nine points if it is collusive. Those firms that take the rules route receive zero points. The data sources used to surface these attributes include extensive media reports – including investigative journalism – audited company reports, academic articles,

⁴⁰ The classification system could be viewed as binary, but to allow the empirical detail to inform the classification, the term “spectrum” is intentionally used.

and individual and company biographies. This instrument suffers from the same limitations of subjectivity and confirmation bias as Instrument 1. However, the strength of Instrument 2 is that it uses authoritative literature on state-business relations, and the reader may use it in conjunction with the empirical research presented in subsequent chapters.

Having extended the theoretical construct of the corporate-political level deal, and built an instrument to evaluate such deals, the last step in building the framework is to consider the asset level partnerships and deals.

2.4.3. Asset-level deals: Matching partners and crafting deals at asset level

The study proposes that each I-firm will search for a complementary partner that mirrors the orientation and corporate strategy of the I-firm (and vice versa in cases where entrants are engaged in seeking). Finding a “good partner” is not a new idea. It features in search frictions in physical capital markets literature (see Kurmann and Petrosky-Nadeau, 2007).⁴¹

Using a patient I-firm as a point of departure, such a player would seek a good E-partner that falls on the patient side of the spectrum to complement the incumbent’s corporate strategy and vice versa. That firms undertake deals with partners and are interested in differentiating good partners from bad partners *ex ante*, is suggested by Ramseyer (1991). The idea, and the predictions, are as follows:⁴²

1. The I-firm, as a minimum, will seek partners with enough political influence to solicit favourable treatment by the state. All incumbents share this minimum incentive.
2. Production or speculation? Firm/partner level production functions are different. A producing firm will have a production function with capital stock as part of the profit function. This introduces direct risks associated with irreversibility and sunk investment. On the other hand, a speculative firm or partner with no interest in production will have a maximisation function that depends on the speculative activity related to equity stocks (e.g., exiting at peak stock price). Therefore, this firm’s maximisation function will be similar to a speculative investor in stock markets. At best, in cases where an E-partner holds passive shares to the medium term, they would resemble an institutional investor’s maximisation function.

⁴¹ By “partner”, this study means the instance where one company comes into a contractual agreement with another company. The partnership can either be about equity transfer, or co-managing a mine. The latter case is also referred to as “joint ventures”.

⁴² Some of these predictions are reinterpretations using Fedderke & Luiz’s (2005) mathematical model on uncertainty and irreversible investment.

3. Even when a firm is a producing firm, it matters whether the corporate strategy mainly depends on rent-seeking, or on productivity and innovation. This affects both the firm's time horizons and the search for like-minded partners. Practically, if an I-firm is opportunistic and merely extractive, the I-firm will prefer similarly opportunistic E-partners.
4. The matching process between the different kinds of firms will likely involve matching the firm's underlying type of maximisation function: (1) patient I-firms will prefer productionist E-partners or patient institutional-like E-partners, while (2) predatory speculative I-firms will prefer similarly organised E-partners.

The next step is crafting the asset-level deal.

Williamson (1999) highlights that a common assumption is that the legal system enforces promises in a knowledgeable, sophisticated, and low-cost way. This is not consistent with the data and has led to additional or alternative modes of governance arrangements between parties. The main method parties pursue is what Williamson calls "private ordering", which arises to solve the problem of credible commitment stemming from incomplete contracting, even in the shadow of the law (i.e., not simply a "Haberian" institutional substitute). This PhD refers to this "private ordering" as "mine-level" deals.

Parties not only assess each other's position on the capital spectrum but also aim to establish functional relationships that adapt to changing political economy and market conditions. When formulating a deal, parties consider the following factors:

- (i) Addressing *ex post* opportunism through *ex ante* safeguards, such as sharing risks in mining joint ventures (JVs) to manage exit risks and mitigate *ex post* opportunism at the political party level.
- (ii) Establishing "credible commitments" to counter opportunism, achieved by crafting adaptive deals like JVs that align interests effectively.
- (iii) Recognising that passive equity transfers prioritise short-term gains over long-term investment, potentially making them susceptible to *ex post* opportunism upon BEE deal compliance maturity.

These distinct firm/asset-level deals, productive and passive, are categorised in Typology A (right-hand side). Productive deals encompass joint ventures and active shareholding, where I-firms and E-firms collaborate in mine operation and management. Passive deals, on the other

hand, involve I-firms assigning passive shares to active E-firms or transferring shares to shells in one-time rent-transfer transactions.

Figure 4 – TYPOLOGY B: Theoretical investment outcomes in I-patient and I-predatory world

		Theoretical investment outcomes in I-patient world		Theoretical investment outcomes in I-predatory world	
		Type of BEE Partner		Type of BEE Partner	
		E-patient partner	E-predatory partner	E-patient partner	E-predatory partner
Type of deal	Production deal	High investment	Empirically unlikely (Impatient E partner) OR low investment	Empirically unlikely (I-Impatient firm)	Low Investment
	Passive equity deal	Moderate to high investment	Low investment	Moderate investment	Low investment or deal collapse

Source: Author

Typology B shows that different types of partners can combine at the firm/asset level to close deals that systematically yield different investment and transformation outcomes. Apart from the binary high-low investment outcome, the hypothesis supposes that the behaviour of patient capital will be continuous large investments over the life of the deal. In contrast, a predatory firm will have low subsequent investment in the deal, on the basis of low credible commitment, and an incentive to sweat assets.

Finally, to operationalise this typology empirically, the question is how to rate different investment outcomes in relation to the extent of success or failure? This leads to the construction of Instrument 3: the firm/asset-level deal success spectrum.

Table 4 – INSTRUMENT 3: firm/asset level deal success spectrum

	Investment outcome	Transformation outcomes	
	<i>y=</i> size of investment (relative to project)	<i>z=</i> stability of deal (failure to realise development policy goal)	<i>t=</i> transformation result Deal develops into productive BEE enterprise (success)
First Tier	High investment = deal with multiple rounds of large investment	$z=1$ if deal remains stagnant; $z= 2$ if deal eventually crumbles	$t=1$ if <i>productive BEE firm</i> , 0 otherwise
Second Tier	Medium investment = (a) deal with one large investment or (b) deal with multiple rounds of modest investment	$z=1$ if deal remains stagnant; $z= 2$ if deal eventually crumbles	$t=1$ if <i>productive BEE firm</i> , 0 otherwise
Third Tier	Low investment = (a) deal with one round of low investment or (b) deal with one round of modest investment	$z=1$ if deal remains stagnant; $z= 2$ if deal eventually crumbles	$t=1$ if <i>productive BEE firm</i> , 0 otherwise
Fourth Tier	No investment = (a) deal but no subsequent investment or (b) negotiation but no deal	$z=1$ if deal remains stagnant; $z= 2$ if deal eventually crumbles	$t=1$ if <i>productive BEE firm</i> , 0 otherwise

Source: Author.

Instrument 3 enables this research to assess the extent to which firm or asset level deals resulted in investment and transformation. The instrument generates different empirical results. For example, a deal that results in high subsequent investment will be classified as first tier investment. A deal that also produces, in the process, a separate, productive BEE company will be classified as first-tier + $t=1$ investment. Consistent with Typology B, there are theoretically unlikely combinations, such as a fourth-tier investment that also results in a productive BEE firm. Instrument 3 is the final output of the theoretical framework.

CHAPTER 3 Paradigm, methodology and methods

Chapter 3 elaborates on the chosen methodology and research methods, while also evaluating the rigor of the process in alignment with the hypothesis.

3.1. What is the research about? The process of identifying a research area

This subsection briefly outlines the process of formulating the research hypothesis and sub-hypotheses that serve as the framework for Part I. It elucidates the journey from the initial question to the hypothesis and the subsequent selection of an appropriate research strategy and methods.

Guided by the methodology expounded in Section 3.2, the project's inception involved a specific inquiry into the underlying rent-transfer strategy integral to the elite transformation initiative. The subsequent theoretical questions examined the incentives driving either a successful convergence of rent transfer and investment or an outcome strongly detrimental to investment. The result of the above questioning process yielded the following:

Rent-transfer initiative: Require new investments in mining to meet robust requirements for inclusion of BEE partners.

- i. logic if it works: credible commitment via a deal at corporate-political level and at asset level;
- ii. logic if it fails: endemic uncertainty

This iterative process, refined further during the research, resulted in a hypothesis asserting that the highest and most sustainable investment occurs when (1) a tangible cooperation deal is forged with the ruling political elite or party, prioritising transformation over predation, and (2) a resilient, patient partnership secures credible commitment at the asset level. Conversely, investments diminish when deals are collusive or formed with predatory partners.

This framework establishes the basis for analysing South Africa's mining capital transformation and the corresponding investment performance within the mining sector. The rationale for concentrating on mining is expounded upon in Section 3.3.

3.2. Approaching the research question

How does the journey from the research question to research implementation unfold? The researcher's research paradigm aligns with pragmatism, a stance that continuously interprets and adapts reality in response to new and unforeseen situations. Pragmatists prioritise research methods that best address the research question, sidestepping epistemological and ontological confines to effectively employ suitable methods for different facets of the research issue (Kaushik & Walsh, 2019), thus evading preconceived conclusions when novel scenarios emerge.

On the basis of the rules-deals and investment framework developed in Chapter 2, the methodology used to answer the question “what happened and why?” combines exploration and interpretation supported by sound empirical data and cases. The emphasis is on an iterative approach, moving between theory, literature, and cases. This approach relied primarily on the “analytic narratives” research approach, and the related process tracing method.

Bates, Greif, Levi, Rosenthal, & Weingast (1998) and Levi and Weingast (2016) propose the analytic narratives approach specifically for problems in development policy and practice. The analytic narratives approach involves selecting a problem or puzzle, then using a case study to build a model to explain the puzzle.

Rational choice theory underpins the analytic narratives methodology, facilitating the transition from description to explanation. It aims to delve into the logical processes generating the studied phenomena. In this context, game theoretic models offer valuable avenues to assess the veracity of narrative accounts, bridging the narrative's salient features and its eventual outcome. Furthermore, this approach seeks to

... account for outcomes by identifying and exploring the mechanisms that generate them....By reading documents, labouring through archives, interviewing, and surveying the secondary literature, we seek to understand the actors' preferences, their perceptions, their evaluation of alternatives, the information they possess, the expectations they form, the strategies they adopt, and the constraints that limit their actions. We seek to cut deeply into the specifics of a time and place, and to locate and trace the processes that generate the outcome of interest” (Ibid., p. 11-12).

This underlying rational choice theory helps to organise the case studies so that one may study the decisions, actions, and interactions of actors, and so arrive at a better understanding of the deals they make.

The method of process tracing complements and strengthens the agility and causal narrative nature of the study. Process tracing is the analysis of evidence on the processes, sequences, and conjunctures of events within a case for the purposes of either developing or testing hypotheses about causal mechanisms that might explain a case. It is an approach that brings together pieces of research material that include disparate, qualitative fragments of evidence about context, process, or mechanism (Bennett & Checkel, 2014).

3.3. Selecting cases to explore the hypothesis

From the analytic narratives approach, the criteria for case selection include the following:

- i. Cases in which key actors interact strategically
- ii. Cases affording opportunity to delve into an important process or mechanism not easily accessible through other means (e.g., credible commitment mechanisms)
- iii. It must be possible to generalise the causal mechanism and the structures or relationships to other cases under specifiable conditions

To concretise the research into specific cases, the research selected the mining sector as a primary sector of primitive accumulation in the history of elite transformation in South Africa. To further narrow the case, the process isolated the platinum industry as the next frontier of rent accumulation.

3.3.1. Specific case studies in platinum mining

The research began by studying and profiling the entire universe of platinum projects and mines located in what is called the Bushveld Igneous Complex or the platinum belt. This is a belt of platinum intrusion running across the provinces of Limpopo, North West, and Mpumalanga. The profiling entailed building a comprehensive dataset of all mines, researching when they started, who owns them, what BEE deals underpin the mine, and whether the project or mine materialised into shaft-sinking investment. On the basis of this overview, presented in Chapter 4, the research could home in on the major actors in the industry that make up a significant share of production, but which vary in relation to the hypothesis.

How did the researcher know that the actors might behave in different ways? This emerged during the next critical step of the research process, which was to comprehensively study the history of mining in South Africa, with a special focus on the Anglo American Corporation, and Lonrho. The history surfaced differences in corporate behaviour which suggested systematic connections between historical corporate behaviour and present investment patterns. Therefore the process moved from the data to modifying the theory of how “we think about the problem” (Bates et al., 1998). The historical study also suggested that the story could be more than the sets of asset-level deals observed in the platinum belt, but a corporate-political engagement which facilitates asset-level deals. Therefore, while the selection process did not select on the dependent variable, an overview was necessary to sort out the patterns of deals over time as an initial step to exploring the usefulness of the hypothesis.

Following this process, the author chose three anchoring cases from an I-firm perspective that provided variation of incumbents by origin, ownership, corporate strategy, and partnerships, as follows⁴³:

Rent-transfer case 1: Anglo American Platinum (Amplats) and BEE partners (Section B and Section D)

Rent-transfer case 2: Lonmin and BEE partners (Section C)

In turn, both of these I-firms provide variation in E-partners through different deals over time. Amplats alone accounts for about 50 per cent upward of platinum production, and a similar ratio in quantum of empowerment deals, during the period under study.

3.3.2. Specific case study level questions and sub-hypotheses

The specific cases of the I-firms, researched in conjunction with the theoretical framework and emerging data, narrowed the case level question as follows:

Case level question: In the post-apartheid environment, with black empowerment at the forefront of the transformation agenda, how did Amplats manage the challenge of locking-in credible commitment in a new and uncertain political environment and thereby mitigate expropriation risk in a way that supported sustained investment in platinum? The question also guided the investigation on Lonmin.

⁴³ Rent-transfer case 3: Northam and BEE partners. Mentioned by way of footnotes in Chapters 1 and 2, Northam was omitted to fit into the word limit of the PhD.

What sub-hypotheses follow?

Following from the initial research process outlined above, the following sub-hypotheses surfaced as a disaggregation of the overarching hypothesis.

a. Variation in investment

The nature of the deals drives variation in subsequent investment:

- i. Level and quality of company-wide investment is a function of the quality of the corporate-political deal
- ii. Level and quality of asset-specific investment is a function of the quality of BEE deals; good deals successfully reconcile rent transfers and investment

b. Quality of deal

It is possible to gauge the quality of a deal by how much it fosters and sustains credible commitment in the face of uncertainty, at two levels:

- i. At the corporate political level in a way that signals cooperation with the political class on the basis of transformation rather than predation
- ii. At mine level a deal with a patient partner that is based on capability-building, namely deals that can withstand changes in political factions, but are themselves supported by robust rule of law

c. Type of partner

- i. A patient I-firm is an investment-driven producer with a strategy to master the deals environment in a developmental/transformational way, while a predatory I-firm pursues collusive deals.
- ii. A “good” BEE partner wants to become a producer (looking to get involved in operations) and is distanced from political factions; a “bad” BEE partner exploits BEE for unproductive wealth accumulation.
- iii. Communities as BEE partner: deals with a corporatised and organised/harmonious traditional authority are more stable than deals with a less organised traditional authority. This is a question of the leadership of each community.
 - a) When it works: deals on communally owned land give firms improved community relations and land access, with local elites helping to secure the operating environment

The following section outlines how the hypotheses were implemented in the research project.

3.4. Turning the hypotheses into action

3.4.1. The unit of analysis and the object of analysis as the arena of action

The empirical exploration focuses on the case studies and the evolution of deals and partnerships over time.⁴⁴ The analysis predominantly operates at the meso-micro and micro-nano levels, encompassing corporate and asset levels as outlined in Chapter 2. The unit of examination revolves around the narratives of actors and their deals within the case studies. The objective is to comprehend the diverse arrangements (deals) and how they yield varying risk mitigation outcomes.⁴⁵ The mines/mining projects serve as the object of scrutiny. The process tracing approach seeks to unveil the "black box" of how actors shape distinct deals and partnerships. This entails delving into the disparities between transactions and understanding their implications for supporting investment.⁴⁶

3.4.2. Periodising the waves of empowerment deals for analytic structure

The process of elite transformation happens over multiple periods. Actors learn and evolve in their strategy and partnerships, either confirming their characterisation along the capital spectrum, or evolving towards a different end of the spectrum. The following is a general timeline of the game from an incumbent and rules perspective:

Time/Round 0 – pre 1994, mainly covering historical evolution of corporate strategies and the Afrikaner empowerment experience⁴⁷

Time/Round 1 – 1994-2001, period of signalling proactive cooperation and legitimacy

Time/Round 2 – 2002-2007, run up to reaching 15 per cent black ownership empowerment deadline, and end of Mbeki era in 2007

Time/Round 3 – 2008-2014, new ANC faction, run-up to reaching 26 per cent of black ownership empowerment deadline, and end of commodity boom in 2014

Time/Round 4 – 2015-2018, industry consolidation, mining community upheaval pressures, and state capture pressures

⁴⁴ In other words, the mechanisms of *ex post* governance are where the main action of economic organisation resides. *Ex post* means, once the deal happens, what happens next that either supports investment or does not?

⁴⁵ This is consistent with the theory of transaction costs, encapsulated in Oliver Williamson's work as outlined in Chapter 2. Transaction cost economics asks what the attributes are on which governance structures (e.g., types of overall deals) differ that have hazard mitigation consequences. It asks why one form of organisation (e.g., joint venture deal to co-operate a mine) is unable to replicate the mechanisms found to be efficacious in another (e.g., passive minority share transfer). Simply put, how does one differentiate between good deals and bad deals?

⁴⁶ Transactions differ in their attributes in a discriminating, transaction cost economising way (Williamson, 1999).

⁴⁷ In 1948 the Afrikaner-led National Party came into power and installed Apartheid as policy. Between 1948 and the late 1980s, this period entailed a process of economic empowerment in favour of the white Afrikaner people (mainly). See Section B of the research.

These are broad timelines from an incumbent’s perspective. In a specific case, the timelines may differ. They certainly differ for entrants, who did not enter the game simultaneously and re-strategized at different times.

The periods themselves have different political economy dynamics. For example, deals might be embedded in a coherent empowerment alliance of Round 1, while the next rounds of deals might occur in a context of competing interests and increased differentiation within the black business class (see Nxele, 2022).

3.4.3. What is the empirical strategy for testing the “rules-deals” hypothesis?

The empirical approach for testing the rules-deals hypothesis does not merely reverse-engineer from the outcome. Instead, it begins by identifying ex ante attributes within one or both I-type firms or E-type firms, subsequently examining whether these attributes were prevalent, and then elucidates the variation in deal quality. This method, outlined below, contributed to the formation of the capital spectrum.

- i. What distinguish "investment-supporting" from non-investment-supporting BEE partners? Enumerate a range of potential attributes. Elaborate on the proposed causal link between each specific attribute and its potential developmental impact.
- ii. Do certain mine-owners exhibit a higher commitment to attracting "beneficial" BEE partners? Define the traits characterising diverse types of mine-owners based on their inclinations.

The tools above were then used, as outlined below.

3.4.4. The empirical task: data collection and analysis

The empirical objective was to explain disparities in investment performance based on the quality of deals. This entailed a methodical approach consisting of the following steps:

- i. Construct the capital spectrum utilising relevant literature to arrange the case studies along the spectrum as delineated in Chapter 2.
- ii. Uncover the corporate strategies employing analytic narrative and process tracing techniques as elaborated in Chapters 5, 7, and 9.
- iii. Examine the deals and partnerships using analytic narrative and process tracing methodologies, and analyse the fluctuations in investment and transformation by

substantiating the variation in investment outcomes with the findings from steps i and ii above, presented in Chapters 6, 8, and 10.

Figure 5 – Tracing deals and investments overtime

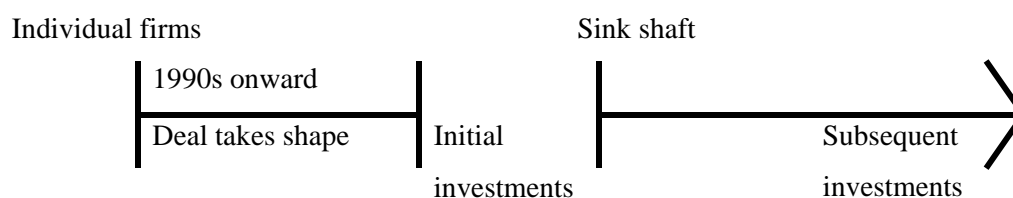


Figure 5 illustrates the process of tracking deals and subsequent investments in line with the hypothesis. This involved comprehending the distinct firms, their corporate strategies, the evolution of partnerships and deals over time, and the corresponding investment trajectories.

The criteria for investment success, post deal, asked the following questions:

- i. Did the investment happen?
- ii. Post investment, was there a thriving, high productivity mine, including ongoing investment
- iii. Post deal, what happened to the BEE partnership/partner?

The data collection was extensive and encompassed a comprehensive dataset of all mines and projects in the platinum belt, in-depth narratives of each actor's business practices and rent accumulation history, and exhaustive information on investment trends. Data sources primarily consisted of audited company annual reports, biographies, investigative journalism articles, and various historical archives including newspapers, reports, and memoirs. This process entailed triangulating multiple sources to enhance data validity and reliability. The combination of narrative methodologies and quantitative investment data further fortified the research. The theoretical framework laid out in Chapter 2, coupled with analytic narrative and process tracing methods, were employed to analyse and interpret the data.

In summary, the process entailed the tracing of a deal, the partnership, and investment over time. The research process made it possible to see how political credibility-seeking and compliance-seeking activities led to successful or failed investments.

3.5. Decisions and Limitations

This section discusses the limitations of the study, particularly those that arise from the research and writing process.

(a) Structuring and sequencing the study in a way that leans on the strengths of the methodology but also communicates the story coherently

The research process outlined in the preceding sections of this chapter presented a challenge of how best to organise the research to tell the story, but without compromising the integrity of the research methodology. For example, at some point in the research, it emerged that I-firms might differ in their orientation towards patience versus predation. The challenge was to demonstrate that this characterisation is an outcome of the research process, rather than a decision taken before or during the research.

(b) Data limitations

Part I suffers from limitations in the data. The first concern is that in collecting sources to craft the corporate histories that ultimately inform the characterisation of each firm, this published material is itself biased. Part of this limitation is that this material was not complemented with interviews, which could have challenged the material. Despite the broad sources of data, the omission of interviews remains a limitation, which is not fully resolved by corroborating with audited investment data.

There are two main reasons for the absence of interviews. First, this study was undertaken during the Covid-19 pandemic, inhibiting travel and interviews. Second, there was a trade-off between breadth and depth. The study could have focused only on Anglo/Amplats and explored variations among its E-firms, but that would have sacrificed the conceptual and empirical distinction between patient and predatory I-firms. Alternatively, the study could have focused only on the I-firms, but that would have sacrificed important sources of variation among E-firms.

Part I also suffers from the limitation caused by the modest number of cases and how this affects the evidence supporting the matching hypothesis. This limitation prompts questions about how matching would play out under different circumstances with a broader range of E-firm partners.

3.6. Conclusion

This chapter has outlined the research approach and process undertaken to produce this study. An additional aim was to highlight the decisions taken, both to make the study replicable by other researchers, and to reveal the limitations and constraints within which the study and findings must be read.

The final chapter of Section A provides an overview of the investments in the platinum belt.

CHAPTER 4 Overview of platinum mining deals and investments

This chapter serves a dual purpose. Firstly, it offers a comprehensive examination of the platinum mining industry's investment performance across time. Secondly, it categorises the investment patterns in platinum mining based on partnerships and the corresponding levels of capital investment linked to each partnership. By pursuing this approach, the chapter facilitates an exploration into how actors can establish credible commitments to sustain ongoing investments. Additionally, it lays the groundwork for identifying the institutional shifts essential for the emergence of productive black capitalists. This chapter further investigates and elucidates the empirical manifestation of these dynamics.

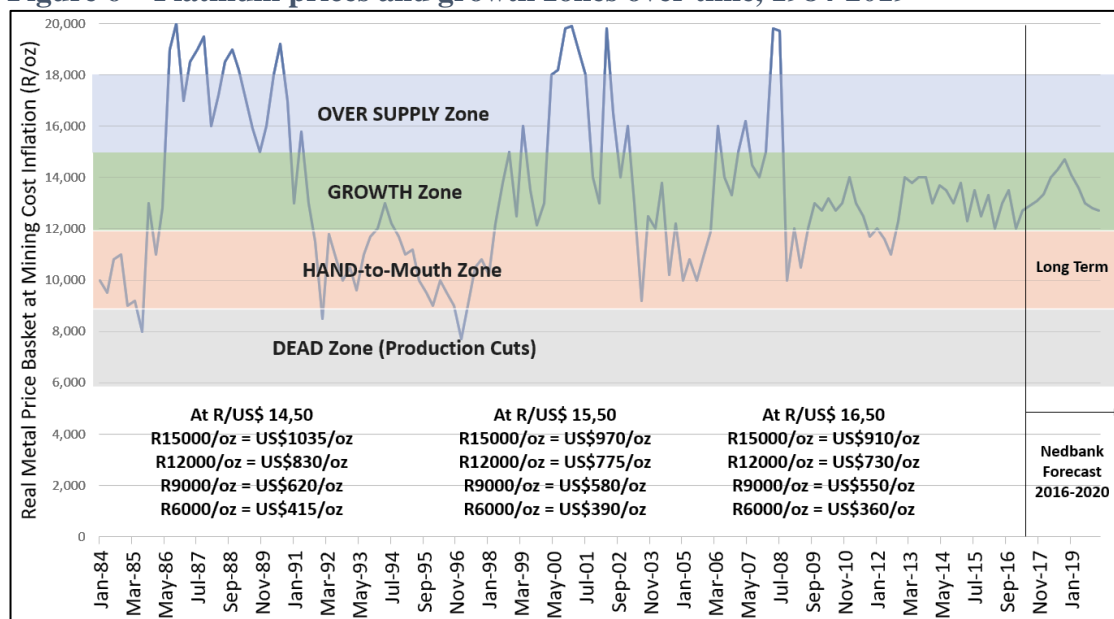
4.1. The mining investment problem: “South Africa missed the commodity price boom”

Despite having the world's largest *in situ* mineral resources by value, the South African mining sector has exhibited lacklustre performance in recent times. Throughout the 15-year commodities upswing from 2000 to 2014, the leading 20 mining nations globally achieved an average annual mining GDP growth rate of approximately 5 per cent. In stark contrast, South Africa's mining sector GDP experienced a contraction of 1 per cent annually (Fauconnier, 2011). Examining the platinum sector specifically, South Africa's platinum producers struggled to capitalise on the favourable economic conditions. Production peaked at 5.3 million ounces in 2006, surging from 4 million ounces in 2001, only to face subsequent challenges in recovery. The regulatory and legislative landscape was plagued by uncertainty, including the looming prospect of nationalisation, which hindered capital expansion plans (Esterhuizen, 2011). According to *Business Live*, multiple sources confirmed in June 2013 that the platinum industry had been consistently grappling with insufficient investment (Seccombe, 2013). Prominent platinum analysts van Graan and Esterhuizen (2016), along with van Graan (2019), verified that the industry endured undercapitalisation during the 2000s, precipitating a decline in production.⁴⁸

Was the general underperformance driven primarily by low prices?

⁴⁸ See the *Financial Mail* (2018) top ranking of analysts 2018.

Figure 6 – Platinum prices and growth zones over time, 1984-2019



Source: van Graan and Esterhuizen (2016)

Figure 6 unmistakably illustrates that mineral and metals prices were not the root cause of the underperformance. Platinum prices have consistently remained in the growth zone during the 2000s commodity boom. Van Graan and Esterhuizen (2016) show that platinum prices and currency exchange rates on their own fail to account for the lacklustre investment performance.

This prompts an exploration of the political economy context. A crucial contextual factor is the post-1994 political transition, which demanded the transformation of South Africa's economic elite from an exclusively white ownership structure to a racially inclusive one. Consequently, the government undertook the nationalisation of mining rights in the country, granting them the authority to allocate these rights to what they deemed as "suitable parties." Subsequent iterations and stricter license requirements ensued, leading to an environment of uncertainty, the risk of arbitrary bureaucratic intervention, and a significant deficit in credibility. These changes unfolded amid challenging economic conditions marked by sluggish growth, effectively turning the process into a zero-sum game within both incumbent and emerging elite circles. The result was a turning away from rule-based effort at BEE to an increasingly personalised contestation. The consequences included uncertainty *vis-à-vis* the rules of the game governing property rights. In turn, this led to a slowdown in private investment, while simultaneously, contestation among rival aspirant business factions escalated, becoming a pronounced feature of intra-ANC political struggles (Levy, Hirsch & Woolard, 2014). The core argument of this study posits that these processes and contestations are, to some extent, reflected empirically in BEE deals.

4.2. Overview of the platinum sector

Historically, subsidiaries of three South African apartheid-era conglomerate firms have dominated platinum production. They are Anglo American Corporation (specifically its offshoot, Anglo American Platinum – Amplats), Gencor (specifically its offshoot, Impala Platinum) and Gold Fields of South Africa (specifically its offshoot, Northam). A fourth dominant platinum producer is Lonmin, which represents the British conglomerate, Lonrho.

Table 5 - Comparative production of top four platinum producers in South Africa, 1995-2019

1995	Amplats	Implats	Lonmin	Northam	Total	Amplats%	Lonmin%
Platinum (000 oz)	1632.8	994	no data	97.975	2724.775	59.92%	
Palladium	784.7	495	no data	45.627	1325.327	59.21%	
Rhodium	119.8	134	no data	7.817	261.617	45.79%	
	2537.3	1623	1,030	151.4	5341.719	47.50%	19.28%
1998	Amplats	Implats	Lonmin	Northam			
Platinum	1861	1052	627.514	185.98	3726.494	49.94%	16.84%
Palladium	930.9	557	291.085	83.626	1862.611	49.98%	15.63%
Rhodium	176.7	112	88.185	14.797	391.682	45.11%	22.51%
	2968.6	1721	1006.8	284.4	5980.787	49.64%	16.83%
2001	Amplats	Implats	Lonmin	Northam			
Platinum	2109.2	1291	717	168.294	4285.191	49.22%	16.73%
Palladium	1049	681	324	79.558	2133.283	49.17%	15.19%
Rhodium	200.4	164	102	13.295	479.576	41.79%	21.27%
	3358.6	2136	1142.3	261.1	6898.05	48.69%	16.56%
2014	Amplats	Implats	Lonmin	Northam			
Platinum	1,890	1178	436.184	241.831	3745.515	50.45%	11.65%
Palladium	1,225	710	210.521	117.305	2263.226	54.14%	9.30%
Rhodium	229	157	78.486	31.007	495.893	46.26%	15.83%
	3344.3	2045	725.2	390.1	6504.634	51.41%	11.15%
2019	Amplats	Implats	Lonmin	Northam			
Platinum	2,485	683.3	666	351.916	4185.601	59.36%	15.91%
Palladium	1,611	332	310	162.217	2414.746	66.71%	12.84%
Rhodium	317	86.9	102	48.835	555.014	57.19%	18.38%
	4412.9	1102.2	1077.3	563	7155.361	61.67%	15.06%

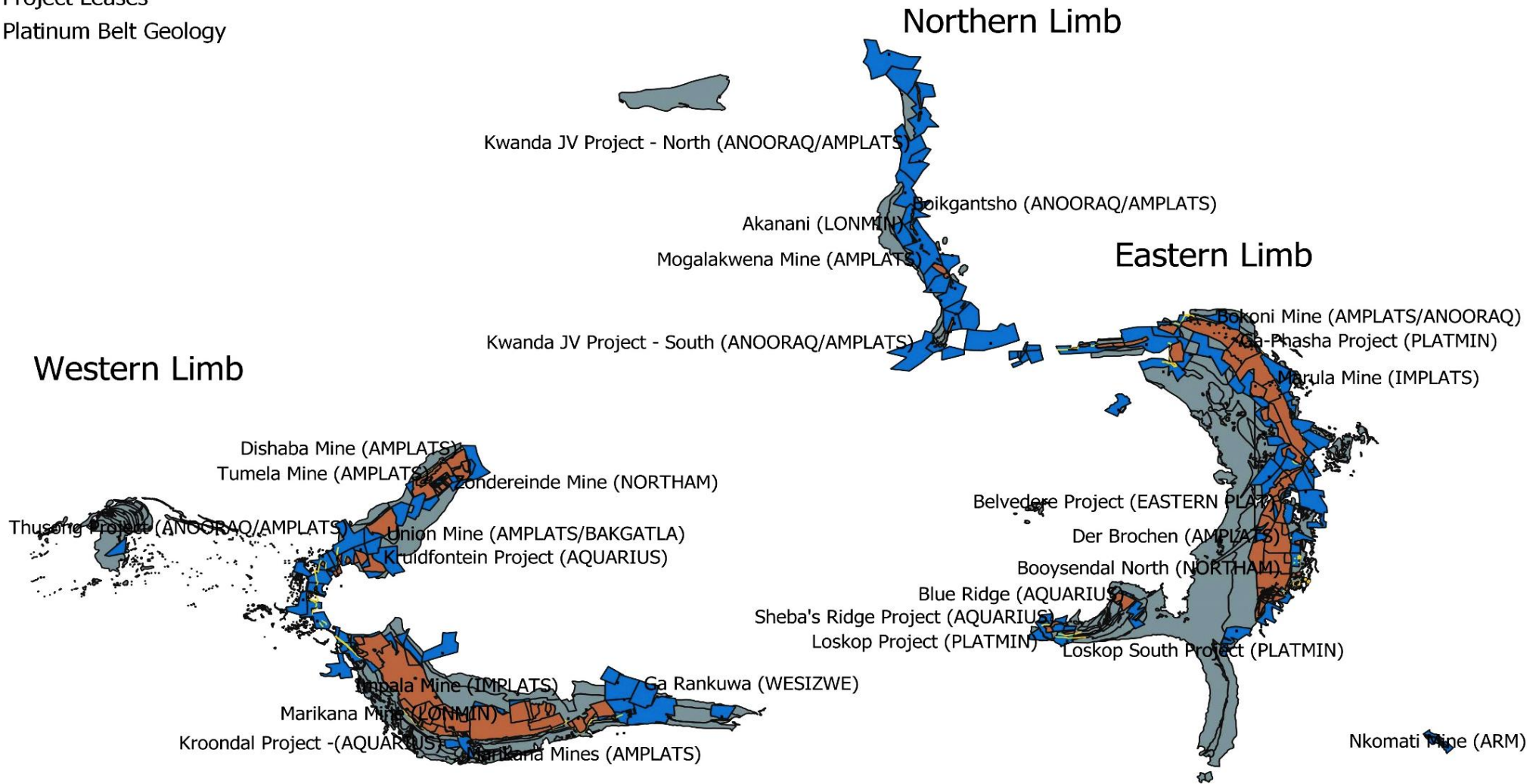
Source: Author, compiled using company annual reports, 1995-2019

Table 5 documents the production shares over time of the leading platinum incumbents. The data demonstrates that Amplats holds a substantial lead as the largest platinum producer, trailed by Implats, Lonmin, and Northam in descending sequence. These four producers collectively account for a significant portion of platinum deals within the platinum belt.⁴⁹ The subsequent visual representation in Figure 7 displays the spatial distribution of these producers' mines .

⁴⁹ Two of the four producers are covered in the case studies. Implats was omitted because of its similarities to Amplats, both in strategy and in choice of BEE partners (i.e., African Rainbow Minerals and the Royal Bafokeng). As noted by way of footnotes in Chapters 1 to 3, Northam was completed but omitted due to the word count limit of the PhD.

Figure 7 - Platinum belt, universe of mines

- Resource Blocks
- Reef Traces
- Project Leases
- Platinum Belt Geology

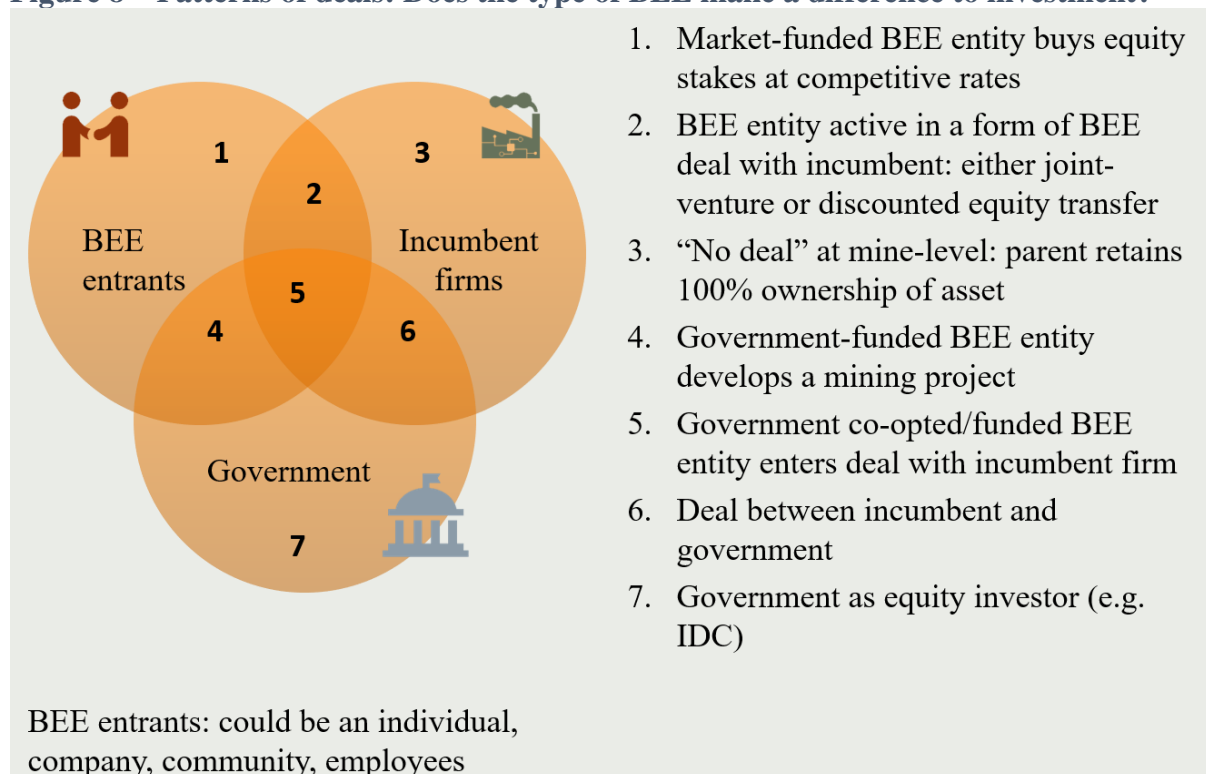


Source: Author, using QGIS. GIS Data from Zientek et al., (2014)

4.3. Overview of patterns and trends in BEE deals

The story of black economic empowerment involves three main groups of actors. The first is the government, serving as the entity establishing BEE regulations and often embodying the ruling political party. The second comprises BEE entrants, primarily from the ruling political party, black organised business, and government, despite the policy being formally accessible to all historically disadvantaged individuals. The third group encompasses the incumbents.⁵⁰ These three actors converge to create diverse patterns of BEE deals, illustrated in Figure 8.

Figure 8 – Patterns of deals: Does the type of BEE make a difference to investment?



Source: Author.

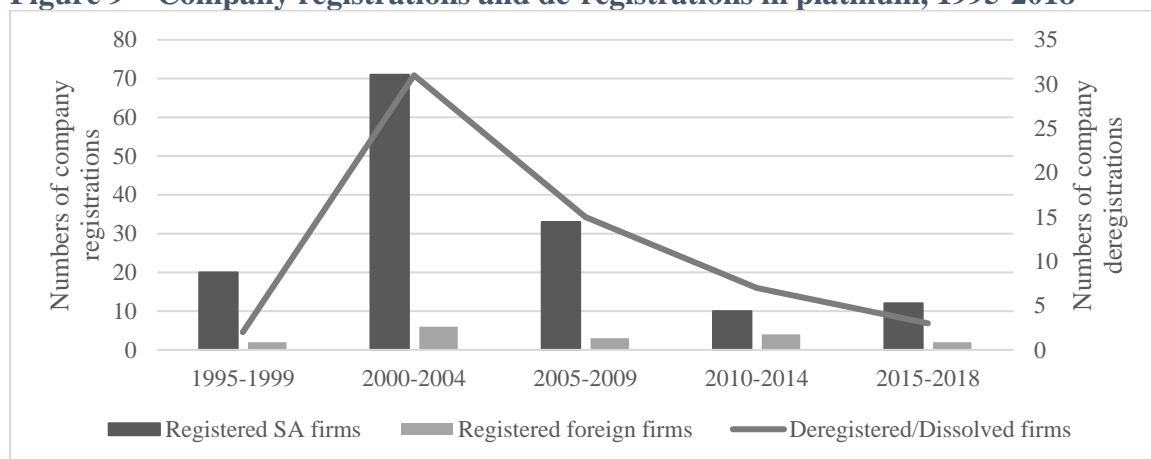
Figure 8 shows the various possible combinations of deals between the three actors. The most common deals happen between I-firms and BEE entrants (combination 2), between I-firms and government (combination 6), and a three-way deal where the BEE entrant is sponsored by government either with mineral rights or funding in order to facilitate a deal with an I-firm (combination 5). There are also several mines that remain 100 per cent owned by I-firms (combination 3). This is an important phenomenon that is explained in the study as itself an

⁵⁰ International entrants are also treated as “incumbents” by government.

outcome of deals. The rarer instances are BEE entrants funding themselves at market prices, or BEE entrants sponsored by government establishing their own mining project.

The introduction of the BEE law in the early 2000s spurred a substantial influx of primarily BEE entrants into the platinum mining sector. This marked a policy success in broadening industry participation. However, as depicted in Figure 9 below, the rapid surge in platinum company registrations during the 2000 to 2004 period did not sustain. Although most of these registrations translated into BEE deals involving equity transfers, the majority did not result in subsequent investments. This phenomenon is further explored below. Notably, the number of registered foreign firms remained limited. A notable observation emerges: while a robust correlation exists between the enactment of BEE and the upsurge in domestic company registrations, a comparatively weaker link is apparent between these registrations and actual investment in the platinum sector.

Figure 9 – Company registrations and de-registrations in platinum, 1995-2018



Source: Author. Data source: Who owns Whom database. (Sic Code:24240)

Put differently, despite a notable influx of entrants, predominantly BEE participants, into the platinum sector, a substantial proportion of these deals either faltered or exhibited unequal success concerning capital investments. The diverse deals throughout the study duration were sourced from the Nedbank Group Economic Unit (2017), annual reports of listed platinum companies, and various mining media outlets. They were then categorised based on their degree of success utilising the tier framework introduced in Chapter 2 as Instrument 3. The findings are visually represented in Figure 10 below.

Summary of patterns of the universe of platinum projects and mines between 1994 and 2018

Figure 10 – Organising the deals-investment patterns: Phases by time when deal happened

		1st Tranche of rights	2nd and 3rd Tranche of rights				
		Round 1 (1994-2001)	Round 2 (2002-2007)	Round 3 (2008 -2014)	Of these, which ultimately failed by 2018?		
		0					
Degree of investment ↑	1st tier deal/high investment	Unbundling results in large, focused mining houses and opportunities for entry	Mining Law 2002	Two Rivers (Implats +ARM 50/50 JV) Nkomati (ARM 100%) Bafokeng-Rasimone (Impala/RBR JV Mine)	None	None	
	2nd tier deal/medium investment			Kroondal Project - Kroondal block (Aquarius + Savannah)	Der Brochen Project (Amplats) Twickenham (Amplats 100%) Tumela (Amplats 100%) Bokoni (Amplats + Anooraq JV) Mototolo (Amplats 100%)	Northam2.0 (Northam + Zambezi) Platreef (Ivanhoe + Platreef BEE) Kalplats Prospect (ARM 100%)	Bokoni Mine
	3rd tier deal/low investment			Blue Ridge (Aquarius + Savannah) Crocodile River – Maroelabult (Eastern Platinum + Gubevu) Crocodile River - Zandfontein (Eastern Plat + Gubevu)	Marikana (NOT the Lonmin Marikana) (Amplats) Kroondal - Townlands (Aquarius + Savannah) Everest (Aquarius + Savannah) Limpopo Project (Lonmin) Leeuwkop (Implats + Mogopa)	Kruidfontein Project (Aquarius + Savannah) Magazynskraal Project (Platmin + Boynton) Bakubung (Wesizwe + Micawber)	Blue Ridge (Aquarius + Savannah) Crocodile River Project - Maroelabult (Eastern Platinum + Gubevu) Kruidfontein Project (Aquarius + Savannah) Magazynskraal Project (Platmin + Boynton)
	4th tier: “didn’t work out”			9 projects	51 projects	39 projects	All

Note: Phases according to timing of deals. Success rate between 1994 and 2014 = 21 per cent

Figure 10 illustrates the distribution of deals across tiers of success over time. Concentrating on the "Round 1" column (1994-2001), the highest-tier investments primarily pertain to core assets that were already established and owned by incumbent firms. During this interval, only one BEE deal resulted in the sinking of a shaft, specifically the deal between Amplats and ARM, detailed in Section B. The majority of other deals fall within the third and fourth investment tiers. Transitioning to "Round 2," most mines were developed through BEE partnerships, with a limited number of successful investments in the first two tiers. Notably, the count of fourth-tier deals surged from nine projects in the preceding period to 51 projects, accounting for the majority of deals executed in that timeframe. In "Round 3" (2008-2014), BEE deals in mining noticeably diminish, featuring a handful of brownfield deals in the second tier. However, once again, the majority of deals culminate in the fourth tier. The final column in Figure 10 identifies investments that had failed by 2018. Remarkably, no investments from the highest-tier category failed. The single second-tier investment that failed (Bokoni mine) is dissected in Section B of Chapter 6. The bulk of the unsuccessful deals are in the third tier, while the fourth tier essentially encompasses deals that never materialised in terms of capital investment.

Several questions arise. For instance, which BEE deals fall within the first and second tiers, and why might they be successful? Who are the key players behind these deals? What stands out about the low/failed investments in terms of the BEE partners involved? How do new partners emerge in the game? These pivotal questions lay the foundation for the ensuing case studies.

4.4. Conclusion

This chapter sought to provide an overview and context of platinum mining, and an overview of the patterns of deals. The chapter's contribution is that beyond the "big picture" of less-than-potential capital investment in the platinum mining sector, there are several investments of varying success, each supported by some form of deal. This descriptive data provides the basis for the exploration undertaken in the following chapters.

This chapter concludes Section A. Section B, is a case study of Anglo American that focuses on the I-firm's strategy, deals, and investment performance.

SECTION B – The strategies, deals and investment outcomes of patient capital

Section B presents the first of three case studies, encompassing two chapters. Chapter 5 delves into the meso-micro level, aligning with the theoretical framework elucidated in Chapter 2.⁵¹ Its objective is to surface the corporate strategy of Anglo American Corporation (or “Anglo”) and its offshoot, Anglo American Platinum (or “Amplats”). Chapter 6, on the other hand, delves into the micro and nano levels, tracing the various corporate and asset level deals and associated subsequent investments over time.

⁵¹ That is, studying the organisation or oligopoly as the unit of analysis.

CHAPTER 5 Tracing the corporate strategy of the Anglo Group and the emergence of African Rainbow Minerals

5.1. The Anglo American Corporation in the economy, the development, and the transformation of South Africa

Founded in 1917 by Ernest Oppenheimer, the Anglo American Corporation, a South African company, has been a pivotal force in the nation's mining history. By 2010, its market capitalisation stood at approximately R770 billion (about US\$90 billion), constituting a noteworthy 18 per cent of the JSE's top 100 companies' value. In the same year, the company invested around R148 billion (circa US\$21.1 billion) in capital expenditure in South Africa, equivalent to approximately 3.5 per cent of the nation's GDP. This significant presence extends to being a substantial contributor to the country's fiscal resources, paying roughly R14.3 billion (circa US\$1.95 billion) in taxes and generating export revenues of approximately R105 billion (circa US\$14.3 billion) in 2010 (Gomwe & Zikhali, 2011). With notable assets encompassing platinum, iron, coal, diamonds, and manganese, Anglo American Corporation holds a crucial place in the mining sector, boasting prime entities like Anglo American Platinum, Kumba Iron Ore, Thermal Coal, and De Beers under its wing (Anglo American & *City Press*, 2017). Anglo's strategic participation in black empowerment joint ventures with entities such as African Rainbow Minerals, Royal Bafokeng Platinum, and Mvelaphanda further positions it in the landscape of transformation in mining. Over time, the company has developed a remarkable history of navigating empowerment deals to safeguard its market-leading position and investments, a journey that unfolded in different rounds of political evolution.

The company's evolution was intertwined with South Africa's political shifts, as it accommodated Afrikaner elites when they gained power in 1948, embarking on empowerment deals to uphold its market dominance. This was its "Round Zero." In the mid-1990s, as politically influential black elites connected to the ANC came to the fore, Anglo harnessed its experience in empowerment deal-making once again. This marked its "Round One," an era during which the company aimed to adapt to the shifting political landscape while preserving its investment and market standing. The influence of Anglo on black economic empowerment in South African mining is immense. Its impact can be quantified as explaining around R60 billion of empowerment deals from 1994 to 2004, a substantial portion of the mining industry's

R100 billion commitment (Southall, 2004), and playing a significant role in shaping prominent black empowerment figures and enterprises in the mining sector (PMG, 2011).

5.2. Anglo American Platinum. Origins, evolution, and BEE role

Amplats stands as the pivotal figure in the platinum sector and is the primary I-firm in both Section B and Section D. This section delivers a concise overview of Amplats' prominence and significance.

5.2.1. Anglo American Platinum in the present

Amplats holds the distinction of being the world's foremost primary producer of platinum group metals (PGMs or platinum). In 2022, its market capitalisation on the JSE amounted to about R318 billion (US\$18.33 billion). Over the study duration, Anglo retained more than 70 per cent (above 78 per cent in 2021) of the company's issued share capital. Amplats engages in various activities across the mining value chain, encompassing exploration, mining, concentrating, smelting, refining, and marketing. The company boasts a longstanding tradition of investing in research and development, leading research on platinum applications and establishing global supply chains focused on platinum (Amplats, 2022).⁵²

5.2.2. The origins of platinum mining and Anglo American Platinum

To comprehend Amplats, tracing back its history becomes essential, which involves both Anglo and Johannesburg Consolidated Investments (JCI or Johnnies). In essence, Anglo acquired JCI and subsequently spun off its platinum assets to form Amplats.

The discovery of platinum in South Africa in 1924 led to the formation of various small companies aimed at exploiting the find.⁵³ Many of these properties came under the control of JCI, making it the world's premier platinum mining owner (Sander, 2000). In 1963, Anglo acquired JCI to safeguard its control over JCI's diamond, platinum, and gold interests (Sander, 2000: 351). JCI later became the vehicle through which Anglo American emerged as the top platinum mining company globally.

⁵² Common uses of PGMs include jewellery, auto catalytic converters, fuel cells, air and water purification units, heart pacemakers, computer screens, hard disks, and fertilisers. In recent years the high value of PGMs has seen platinum become a prime investment commodity alongside gold (Amplats, 2022).

⁵³ These companies included Premier Rustenburg Platinum, Eerstegeluk Platinum Mines, and the Rustenburg Platinum Company – created by Gold Fields (Nxele, 2022).

In 1995, Anglo unbundled JCI into three entities to advance black economic empowerment. The platinum assets were consolidated into a new Johannesburg Stock Exchange (JSE)-listed company named Anglo American Platinum (Amplats). Amplats instantly became the world's largest platinum producer (Nxele, 2022). Industrial assets formed a part of Johnnic, while certain gold assets were grouped for disposal under a smaller JCI.

A comprehensive exploration of Anglo's history unveils how JCI assumed significance in Anglo's navigation of South Africa's evolving political landscape. First, an overview of Amplats' role provides context to its prominence in the domain of BEE deals.

5.2.3. Overview of Anglo Platinum's BEE deals and the expropriation risk

Amplats-specific deals began during the late 1990s (Round One) amid escalating uncertainty about the security of mining rights due to the establishment of a commission to formalise BEE. This commission, formed in 1998 by the Black Business Council allied to the ANC, resolved to transform mining sector ownership by nationalising mineral rights (O'Malley, 2004). In response, Amplats' annual report for the following year reflected its apprehension over mining rights and their ownership security. It highlighted the significance of security of mineral rights for sustaining developmental activities (1999: 18).

Between 1999 and 2002, leveraging lessons from Anglo's experience, Amplats executed empowerment deals worth over R8 billion, constituting a substantial part of the 15 per cent empowerment target set by the government within five years of the Act's issuance (Amplats, 2002a). These deals varied in structure and involved empowerment partners from organised black business, the ANC, and platinum land-owning communities. Notably, Patrice Motsepe, an influential member of the black business group NAFCOC, entered a 50/50 joint venture partnership with Amplats. Tokyo Sexwale, a prominent ANC insider, received shares from Amplats in Northam platinum. Additionally, the Royal Bafokeng community held platinum-rich land around Amplats' operations.

In 2002, after extensive interactions with the Department of Mineral Resources (DMR), Amplats relinquished certain mining rights while retaining strategic rights. It also entered partnerships with DMR-selected partners such as Khumama platinum and Pelawan Investments, both linked to the ANC. These deals are discussed in-depth in Chapter 6. Suffice it to highlight that Amplats significantly contributes to the landscape of empowerment deals in the platinum sector.

Round Zero (1948-1994): Afrikaner Empowerment and Anglo's corporate strategy in action

With the introduction of both Anglo and Amplats, this chapter now delves into the rounds of Anglo's corporate strategy, beginning during the Apartheid era.

5.3. Surfacing Anglo's Corporate Strategy and Engagement with Afrikaner Empowerment

This subsection serves a dual purpose. Firstly, it unveils Anglo's mid-1900s corporate strategy by scrutinising its actions and behaviour. Secondly, it explores how Anglo interacted with Afrikaner empowerment. This historical exploration becomes crucial as it provides insights into Anglo's corporate strategy within a framework of racially based economic empowerment.⁵⁴

Following the rise of Afrikaners to political power in 1948, the 1950s witnessed their economic interests making inroads into mining, challenging Anglo's dominance. Sanlam, the Afrikaner financial institution, established the mining company Federale Mynbou (or Fedmyn) in 1953 (Verhoef, 2018). By 1962, through state-favouring procurement policies, Fedmyn evolved into the second-largest coal company in South Africa, trailing only Anglo. This marked the initial success of racial preferential policies. In the same year, Fedmyn aimed to extend beyond coal mining by gaining control of Johannesburg Consolidated Investments (JCI), an attractive mining house founded by Barney Barnato.⁵⁵ JCI held diamonds (25 per cent of De Beers), platinum, and copper, with Rustenburg Platinum, the world's largest platinum mining entity, under its control.

Anglo also sought to acquire JCI as part of its corporate expansion strategy to acquire primary producing mining assets. In response, Anglo thwarted Fedmyn's attempt, prompting state-backed efforts to seize some of Anglo's assets. To defuse the situation, in 1963, Anglo transferred General Mining and Finance Corporation, one of its gold mining subsidiaries and a less profitable asset, to Fedmyn. This marked a significant empowerment deal, denoting

⁵⁴ It is important to note that these narratives are condensed so that they are fit for purpose. Therefore, omissions in the story are unavoidable given the word limit, and the need to produce a focused study.

⁵⁵ Barney Barnato was a major player in the early diamond and gold rush in South Africa in the 1800's and early 1900's. Direct study of this player is beyond the scope of this narrative, but readers may refer to Lewinsohn (1938) and Fish (1982) for in-depth studies of Barnato, and Sander (2000) for an in-depth study of the history of JCI between 1889-1995.

Afrikaners' entry into non-coal mining, referred to as a "gift" from the Oppenheims by O'Meara.⁵⁶

This manoeuvre successfully diverted Fedmyn from pursuing control over JCI, paving the way for Anglo's eventual acquisition of JCI. Even though Afrikaner capital made headway into the mining industry by the end of the 1960s, Anglo maintained its dominance over gold mining through its mines and control over JCI, Rand Mines, and Central Mining.

Table 6 – Anglo’s scale and reach; and other mining players, including emergent Afrikaner capital in the 1960s

Company	1960 Market capitalisation (£m)	1970 Ultimate controller
Anglo American Corporation	87.3	Anglo American
JCI	15.1	Anglo American
Rand Mines	12.7	Anglo American
Central Mining	15.5	Anglo American
General Mining	15.3	Sanlam
Union Corporation (General Mining)	32.8	Sanlam/Rembrandt
Anglovaal	5.7	Hersov/Menell families
Goldfields	33.7	Goldfields

Source: Innes, 1984:165.

Table 6 demonstrates the extent to which Anglo managed to gain control over most mining companies operating in South Africa by the 1960s. By the late 1980s, Anglo's corporate strategy had led to a dominant mining and finance conglomerate, encompassing half of the JSE and permeating other sectors through its holdings. David Pallister's extensive review of the Oppenheimer business empire, "*South Africa Inc.: The Oppenheimer Empire*," in 1987 revealed that the combined assets of all Oppenheimer-affiliated firms totalled R98.8 billion (Pallister, 1987). In comparison, the South African Government's assets in state-run enterprises amounted to R98.1 billion (Kaplan et al., 1971; Granelli, 1988).

It is worth noting that the ruling political party at that time, the National Party, harboured suspicion and discord toward the Oppenheims, especially Harry Oppenheimer, who was a leader in the opposition United Party. The National Party feared that Oppenheimer aimed to exert economic pressure to weaken the government and induce concessions. In 1960, Prime Minister Verwoed stated in parliament that certain business entities conducted private discussions much like political parties and the Cabinet. He pointed out the potential influence

⁵⁶ In 1965, Federale and General Mining merged to form Gencor. Thereafter, Gencor grew its operations through acquisitions and greenfield investments over the next three decades across a range of mineral sectors. Gencor would later reverse offshore into Billiton in 1996 and subsequently the (Australia-based) global major BHP Billiton (O'Meara, 1983; Christianson, 2017b).

of these entities, such as the Oppenheimer group, in various spheres of South Africa's economic life (Hocking, 1974: 369).

This period showcases how Anglo effectively managed Afrikaner empowerment, maintaining its dominance. Its initial empowerment deal involved shedding marginal assets to divert Afrikaner capitalists (and the state) from controlling its existing and targeted assets. Thus, Round Zero (1948-1989) witnessed Anglo learning strategies to navigate empowerment. Additionally, Anglo operated within the apartheid era where factions of Afrikaner capital aligned with the state. This taught Anglo the importance of political connections as a strategy for protection from hostile expropriation-related policies. The shedding of marginal assets emerged as an effective way to engage with politically influential entrants and gain room to acquire valuable assets. These lessons would prove instrumental in maintaining a favourable environment for Anglo amid changing political contexts and ruling parties in subsequent rounds.).

Round One (1994-2001). Anglo learning the game of BEE and good partnerships

5.4. The 1990s and Anglo's initial search for BEE partners in mining

In the early 1990s, as the momentum behind a peaceful political transition gathered steam, mine owners faced the possibility of losing profits through greater taxes or nationalisation. Anglo responded with two critical moves. Firstly, it protected its investments from the uncertain future in South Africa by "offshoring" some of its assets. In 1993, Anglo placed all of its offshore assets out of reach from a looming democratically elected government in South Africa by selling the South American, European, and Australian operations of both Anglo and De Beers to Minorco in exchange for US\$1.4 billion of Minorco stock (ANC Policy Institute, 2012). Secondly Anglo "re-made" and "re-positioned" itself to cement a certain (rather than uncertain) future in the "new" South Africa. The JCI company that it acquired would be its main instrument for initiating black empowerment.

As its first move to establish a BEE presence in gold mining using JCI, Anglo turned to ANC stalwart, Mzi Khumalo, who had won the competitive bid against another ANC leader, Cyril Ramaphosa. To Anglo, Khumalo seemingly had the right profile. As a youth, Khumalo had joined the ANC's clandestine army and trained in the Soviet Union. He was captured in 1978

and spent 12 years on the Robben Island prison along with other ANC struggle stalwarts such as Nelson Mandela and Tokyo Sexwale (McNeil, 1998). Soon after his release in 1990, Khumalo became ANC provincial treasurer in Kwa-Zulu Natal. In 1994 he founded Capital Alliance. The company was quickly backed by Saflife, an insurance conglomerate, and Investec. Within two years, Capital Alliance had several financial interests and was said to be worth more than US\$1 billion (McNeil, 1998). Anglo bought into this stellar profile.

Khumalo's breakthrough came with the JCI deal. Outbidding Cyril Ramaphosa's consortium, Khumalo's group secured 34.9 per cent of JCI, establishing the first mining house controlled by black shareholders (McNeil, 1998). However, the JCI-Khumalo deal eventually faltered. As the gold price declined in 1997, Khumalo's leadership and the struggling gold market led to difficulties for JCI-Khumalo (ANC Policy Institute, 2012).

While Anglo's initial attempt into mining-BEE was thus seemingly a failure, its efforts to alter the corporate form of its mining holdings were not entirely in vain. Anglo used the JCI assets to optimise Anglo's global position, cherry picking and buying back some of JCI's gold mining assets at distressed prices and using the opportunity to resolve its difficulties with the EU competition authorities (ANC Policy Institute, 2012). To resolve the failure of the JCI empowerment transaction, buying back some of JCI's gold mining assets also gave Anglo the opportunity to "try again", but with a "better" BEE partner.⁵⁷

5.5. How did the JCI empowerment deal fail?

The collapse of the JCI-Khumalo deal offers insight into the dynamics of empowerment partnerships and the impact of different partner strategies on the outcomes of such deals. This section sheds light on the multifaceted story of the JCI deal, highlighting the role of different phases of JCI and the emergence of Brett Kebble as a significant player.

Brett Kebble, a white South African, enters the narrative in 1992 as a new lawyer. Alongside his father Roger Kebble, he acquires Rand Leases, a struggling gold mining company, for a minimal price per share. Within a year, Kebble manages to elevate the stock's value

⁵⁷ This is how Anglo bought back the assets from JCI. Anglo swapped its 26 per cent shareholding in Lonrho for JCI's 36.6 per cent holding in Western Areas, JCI's 60 per cent stake in Joel as well as its 3 per cent interest in Amplats. JCI then resold for cash its 26 per cent interest in Lonrho back to Lonrho. JCI then unwound its remaining holdings, passing shares in JCI Gold, Randfontein Estates and other assets back to shareholders (ANC Policy Institute, 2012).

significantly. He engineers the merger of Rand Leases with Randgold in 1994, generating substantial value (Ryan, 2005; Sergeant, 2012). Kebble's primary ambition, however, was JCI.

At the time, Anglo was considering JCI for black empowerment purposes, and Kebble manoeuvred his way into the deal. He offered to finance Mzi Khumalo's stake through complex financial arrangements, presenting himself as a supporter of Khumalo and the face of the JCI-Khumalo deal. However, Kebble was clandestinely in control of JCI-Khumalo due to the contractual intricacies (Sergeant, 2012).

As gold prices continued to decline in 1997 and Khumalo encountered challenges in managing JCI-Khumalo, Kebble capitalised on the situation. He worked with the board to oust Khumalo, then masterminded the breakup of JCI-Khumalo (*Mail & Guardian*, 2003). Through quiet acquisitions of distressed investors in the gold division, he gained control of quality gold assets. While liquidating JCI-Khumalo, Kebble shielded the gold division and devised a plan to establish JCI-Kebble. In 2002, Kebble executed a transaction that eliminated remaining minorities in the JCI-Khumalo gold division, effectively creating JCI-Kebble. He appointed Wiseman Nkuhlu, a respected figure aligned with Thabo Mbeki, as chairman of JCI-Kebble to project an image of genuine black economic empowerment (Sergeant, 2012).

JCI-Kebble's primary asset was a majority stake in the Western Areas gold mine, which originally held 100 per cent of South Deep mine, one of South Africa's largest gold deposits. Kebble indirectly controlled over 40 per cent of South Deep's resources. However, South Deep required extensive development spanning decades and significant financial investment before becoming profitable (Ryan, 2005, 2006).

Starting around 1999, Kebble diverted financial resources from Rand Leases through unauthorised transactions. He also raised billions in debt using speculative financial products and other financial engineering tactics. Kebble further aligned himself with ANC cadres, fostering relationships with ANC Youth League leadership, influencing police officials like national police commissioner Jackie Selebi, and even making substantial donations to the ANC from the proceeds of his unconventional business deals (Sergeant, 2012).

As Kebble's manipulative tactics became increasingly visible to stakeholders, his empire unravelled, leading to the collapse of JCI-Kebble and his death under questionable circumstances. This story highlights the intricacies of empowerment partnerships and the profound influence of the type of partner involved. Anglo's involvement in this narrative points

to potential shortcomings in partner vetting and oversight or a lack of understanding about the significance of partner characteristics beyond political connections.

The collapse of the JCI-Khumalo deal marked a learning experience for Anglo in the field of BEE. Before characterising Anglo's position on the patient-predatory spectrum, it is essential to introduce Patrice Motsepe, a pivotal entrepreneur in Anglo's BEE strategy, and contrast his approach with that of Brett Kebble.

Round Two (early 2000s). Finding a good partner in Patrice Motsepe's African Rainbow Minerals

5.6. Motsepe in the 1990s decade: A contrast to Kebble

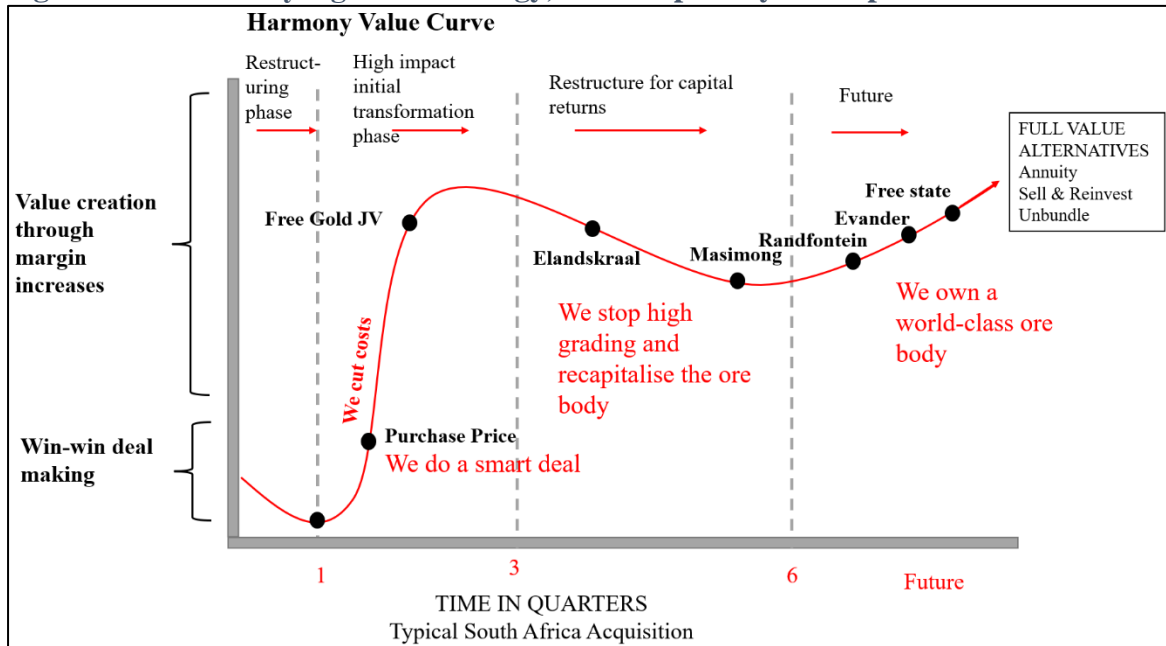
After the collapse of the JCI-Khumalo deal, Anglo sought to establish new black empowerment partnerships to ensure the success and credibility of its BEE initiatives. The collapse of JCI had significant implications for Anglo, as durable and credible black partnerships were crucial for the company's future in post-apartheid South Africa.

Patrice Motsepe emerged as a significant player in this landscape. Like Brett Kebble, Motsepe had a background in law and entered the mining industry through unique circumstances. Motsepe's father, Kgosi Augustine "ABC" Motsepe, was an influential entrepreneur and chief, affording Patrice opportunities and connections that were typically limited to the elite. Patrice Motsepe's involvement with the National African Federated Chamber of Commerce (NAFCOC) and other connections allowed him to network and position himself within the black business community and ANC circles (*Mail & Guardian*, 2014).

In 1994, Motsepe established Future Mining, a company focused on providing mining services to enhance the productivity of struggling mining shafts (Etheredge, 2009). He partnered with Harmony Gold in a joint venture, named Clidet No. 383, and later established his own gold mining company, African Rainbow Minerals (ARM), following a similar growth strategy implemented by Harmony Gold under Bernard Swanepoel's leadership.

This strategy, outlined in Figure 11, involved identifying underperforming gold assets that could be acquired at low prices, recapitalising the ore body, and transforming them into world-class assets. This approach allowed Motsepe's ARM to generate cash flow for future acquisitions and greenfield projects, proving its success to Anglo when the company was seeking credible beneficiaries for the recovered JCI gold assets.

Figure 11 – Harmony’s growth strategy, also adopted by Motsepe



Source: Swanepoel (2002: 7)

Winning Anglo's bid for the re-transfer of these assets marked the start of Motsepe's ascent as a mining industrialist. He acquired some of the gold mines incrementally and successfully repaid a loan of around \$8.2 million through production-based profits, a departure from the typical market performance-based loan repayment approach in BEE partnerships. Motsepe's hands-on involvement and success at turning around mines made him a preferred beneficiary for Anglo's further disposal of JCI gold assets between 2001 and 2003 (Competition Tribunal, 2002; Anglo American & *City Press*, 2017).

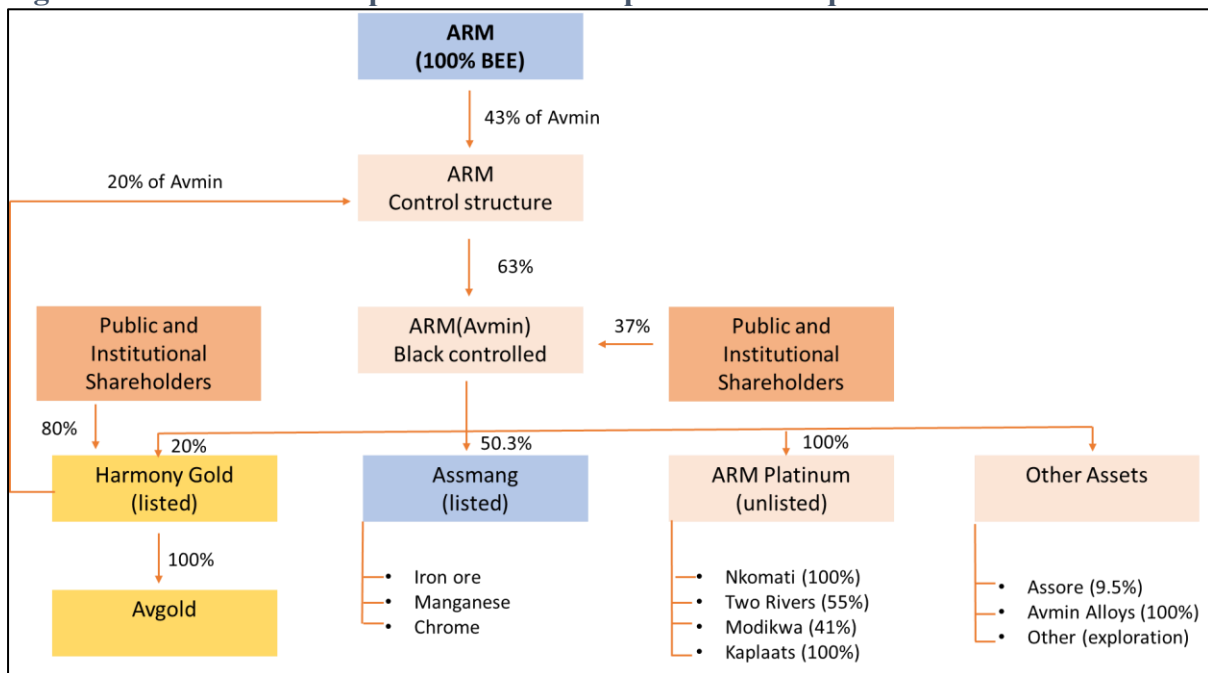
As the joint venture between ARM and Harmony Gold was taking shape and making strides in the mining industry, Patrice Motsepe had ambitious plans for his company, African Rainbow Minerals. It was during this period that he aimed to list ARM on the JSE, a milestone that would further solidify the company's position in the mining sector (Fin24, 2001).

5.7. Motsepe in the early 2000s and ARM's Anglovaal takeover with Anglo's support

The listing of ARM involved the acquisition of Anglovaal Mining (Avmin), an historically significant mining company established in 1932 by the Menell and Hersov families. In the late 1990s, Avmin was divided into Avmin (mining assets) and Anglovaal Industries (AVI, industrial holdings), and by 2001, control of these entities was largely held by the Menell and Hersov families.

Avmin faced financial difficulties in the early 2000s, and Anglo American acquired Avmin to later transfer control to Motsepe. This enabled Motsepe to list ARM on the JSE, with ARM's market capitalisation initially amounting to approximately R6.9 billion. After taking over Avmin, ARM pursued a strategy of diversification, developing various projects within its portfolio.

Figure 12 – ARM 2002 corporate structure – post Avmin acquisition



Source: African Rainbow Minerals (2004: 11)

Motsepe's ARM became involved in several joint venture deals, leading to its transformation into a diversified producing company. Notably, ARM's joint ventures included platinum assets such as the Modikwa project in collaboration with Amplats, the Two Rivers project with Implats, and the later Bokoni project with Amplats. These ventures marked ARM's expansion into platinum mining, and they play a significant role in the evolution of Anglo American's BEE efforts in the mining sector.

5.8. Conclusion: Placing Anglo and ARM on the capital spectrum

Chapter 5 concludes by placing both Anglo American and ARM on the capital spectrum based on their corporate strategies and actions. The purpose of this placement is to assess where each company falls in terms of patient capital attributes and how they align with the spectrum discussed in Chapter 2.

5.8.1. Anglo American's Placement on the Capital Spectrum

Based on the narrative and analysis provided in this chapter, Anglo American emerges as a company that prioritises long-term fixed investments, productive operations, and sustainable relationships. The company's approach is characterised by strategic foresight, adaptability, and engagement with South Africa's political and economic context. While being ruthless in business, Anglo American also displays a commitment to contributing to society through its investments and operations.

Table 7 - INSTRUMENT 1: Anglo/Amplats and ARM score on the capital spectrum

Attributes	Company types				Anglo/ Amplats score (5)	ARM score (6)
	Patient/Producer company (farsighted)* (1)	Investment- holding company (2)	Opportunistic (3)	Predatory (4)		
<i>Incentives or behaviour</i>						
Focus is on fixed investment, production, and skills	+++	++	+	0	3	3
Patient capital invests in exploration and mine development	+++	++	+	0	3	2
Patient capital creates a pipeline of fixed investment projects	+++	++	+	0	3	2
Patient capital seeks for patient JV partners	+++	++	+	0	2	2
Patient capital seeks long-term production-based deals with partners	+++	++	+	0	2	3
Patient capital deploys its own balance sheet capital to domestic investment	+++	++	+	0	2	2
Patient capital, or its corporate strategy, sits above political factions	+++	++	+	0	2	2
Majority of revenue comes from sales of produced goods and services	+++	++	+	0	3	3
Maximum score	24	16	8	0	20	19

Table 7 (Instrument 1) above is the capital spectrum presented in Chapter 2. Taking a conservative grading of Anglo in column 6, Anglo scores 20 out of 24 points. This score places the I-firm on the patient side of the spectrum. The company demonstrates attributes that align with patient capital, such as focusing on fixed investments, production, and skills development, as well as seeking patient joint venture partners and engaging in long-term production-based deals. Furthermore, Anglo American's ability to navigate the political landscape and maintain a consistent presence in South Africa indicates its position on the patient side of the spectrum.

5.8.2. African Rainbow Minerals' placement on the capital spectrum

The narrative surrounding Patrice Motsepe's African Rainbow Minerals portrays a company that actively engages in mining operations and transformational efforts. Motsepe's background, success in turning around struggling mines, and commitment to operational excellence contribute to his credibility as a mining industrialist. ARM's partnership with Harmony Gold and its subsequent ventures highlights its productive approach to joint ventures and its role in diversifying the mining sector.

In terms of the capital spectrum (Table 7) ARM also falls on the patient/producer side (19 out of 24 points). ARM's attributes align with patient capital characteristics, as it focuses on operational mining activities, explores and develops mines, creates a pipeline of fixed investment projects, and engages in long-term production-based deals. Motsepe's commitment to building operational mining companies and actively participating in the industry supports his placement on the patient side of the spectrum.

5.8.3. Empirical Testing and Further Exploration

The chapter acknowledges that while the narrative and analysis presented provide a foundation for placing these companies on the capital spectrum, further empirical testing and exploration are necessary. The next chapter (Chapter 6) delves into specific deals and investments to assess whether the characterisations of Anglo American and ARM along the spectrum hold true in practical terms. The case studies explored in subsequent chapters will provide more insights into the relationships between corporate strategies, deals, and investments within the mining sector.

In conclusion, Chapter 5 establishes a framework for evaluating companies along the capital spectrum and uses this framework to position Anglo American and African Rainbow Minerals based on their observed corporate strategies and actions. This sets the stage for a more comprehensive analysis in the chapters that follow.

CHAPTER 6 Amplats: Tracing two-level deals, subsequent investments, and transformation

6.1. Introduction

This chapter builds upon the preceding discussions, noting the ubiquitous nature of BEE deals and partnerships with politically connected entities in the mining sector. These deals, however, exhibited varying outcomes, prompting a need to explore the strategies that underlie successful transformation and investment. Amplats serves as a case study to address this, focusing on its approach to expropriation risk and sustained platinum investment in the post-apartheid era. The research question in this chapter is as follows:

In the post-apartheid environment, with black empowerment at the forefront of the transformation agenda, how did Amplats mitigate expropriation risk in a way that supported sustained investment in platinum? That is, how did Amplats manage the challenge of locking-in credible commitment in a new and uncertain political environment?

The chapter finds that Amplats used a two-level deals strategy at the corporate and asset levels to resolve the following problems:

1. By nationalising the mineral rights, government was determined to reallocate several rights owned by Amplats to other investors. Government, rather than Amplats, would have control over which rights would be reallocated to Amplats, and which rights removed. This was a problem because Amplats had accumulated and invested in several mining properties that it considered its core assets in terms of (1) its position as the top platinum producer in the world, and (2) its expansion plans for these properties to maintain that position. Amplats wanted to prevent the expropriation of these core assets and to keep these assets on a 100 per cent ownership basis.
2. By nationalising the mineral rights, the government set out to offer these rights to a broad spectrum of local and international investors, while using BEE rules. Government's idea was that this would change the ownership structure of the platinum belt, create a platinum rush, and therefore make the platinum belt investment-active on a broad and empowered basis. Amplats was concerned that, after investing for decades in managing platinum supply

and stimulating platinum demand, an uncoordinated ramping up of platinum supply would erode value for everyone.⁵⁸

Given these two problems, Amplats made a corporate-political level “package deal” with the Department of Mineral Resources (DMR or government), structured as follows:

A. The corporate-political level deal of cooperation and insulating 100% assets

- i. Amplats offered several platinum bearing parcels of land, in return for security of property rights in a selected suite of its core assets⁵⁹
- ii. Amplats convinced the government that instead of merely transferring equity to BEE partners, as stated by the mining law, it would undertake various joint ventures with BEE partners. As a compromise
 - a. Amplats accepted to work with government-sponsored BEE partners
 - b. Amplats accepted the condition that it would not conclude any further deals with Motsepe beyond the Modikwa platinum deal

To support the “package deal” and address the second problem, Amplats set out a strategy of asset-level deals, as follows:

B. Asset level deals to lock-in credible commitment

Amplats partnered with two groups of partners.

- i. The first were BEE partners as part of the BEE/expropriation risk imperative.
- ii. The second group of partners were other I-firms, mainly the few international entrants in South African platinum. These entrants took the opportunity to work on the land that Amplats had given away as part of the package deal, and that had subsequently been made available to other investors. Amplats engaged with these deals in ways that committed to investment and to BEE by ensuring the partners met compliance rules.

Therefore, while government’s plan could not be stopped, Amplats could offer itself as a joint venture partner to (1) local BEE entrants, directly addressing the transformation imperative,

⁵⁸ The reader will notice that throughout the case studies, Amplats maintains a strong presence in terms of ownership, precisely because of its determination to ensure oversight of the supply side of platinum.

⁵⁹ In other words, in return for releasing some properties for empowerment deals, Amplats could guarantee conversion of its old order right to new order rights in selected properties.

and (2) international entrants. For all these joint ventures, Amplats purchased the portion of platinum concentrate attributable to the partner, thereby remaining the sole export channel.

With this plan in place and the package deal concluded, the chapter finds that Amplats proceeded with (1) large subsequent capital investment on its 100 per cent owned assets and (2) concluded various deals with the two sets of partners (local and international), while investment performance varied by the quality of the deal.

6.2. Theoretical expectations: Amplats as patient capital and outcomes

The discovery from Chapter 5 that Amplats embodies patient characteristics forms the foundation of this chapter. This revelation marks the midpoint of hypothesis evaluation. Drawing on the notion of Amplats' patience, the meso-micro-level theoretical model (Typology A) posits that patient capital tends to adopt an investment-centric corporate strategy. This strategy, in turn, employs credible contracting as a mechanism to navigate expropriation risk. This strategy unfolds into the development-focused two-tier deals, as previously discussed. The patient and transformative approach is anticipated to yield stable and advantageous deals, culminating in moderate to substantial investments and positive transformation results.

Regarding firm/asset level dealings, the nano-level theoretical model (Typology B) generates potential outcomes based on the type of BEE partnerships engaged by patient I-firms. Figure 13 (below) reproduces Typology B.

Figure 13 – TYPOLOGY B: Theoretical investment outcomes in I-patient world

		Theoretical investment outcomes in I-patient world	
		Type of BEE Partner	
		E-patient partner	E-opportunistic partner
Type of deal	Production deal	High investment	Empirically unlikely (Impatient E partner) OR low investment
	Passive equity deal	Moderate to high investment	Low investment

Source: Author

Expectations concerning moderate to substantial subsequent investments within the I-patient realm's asset level deals hinge partially on the orientation of E-firms in each deal. While it is improbable for a patient I-firm to engage an opportunistic partner, particularly if prior

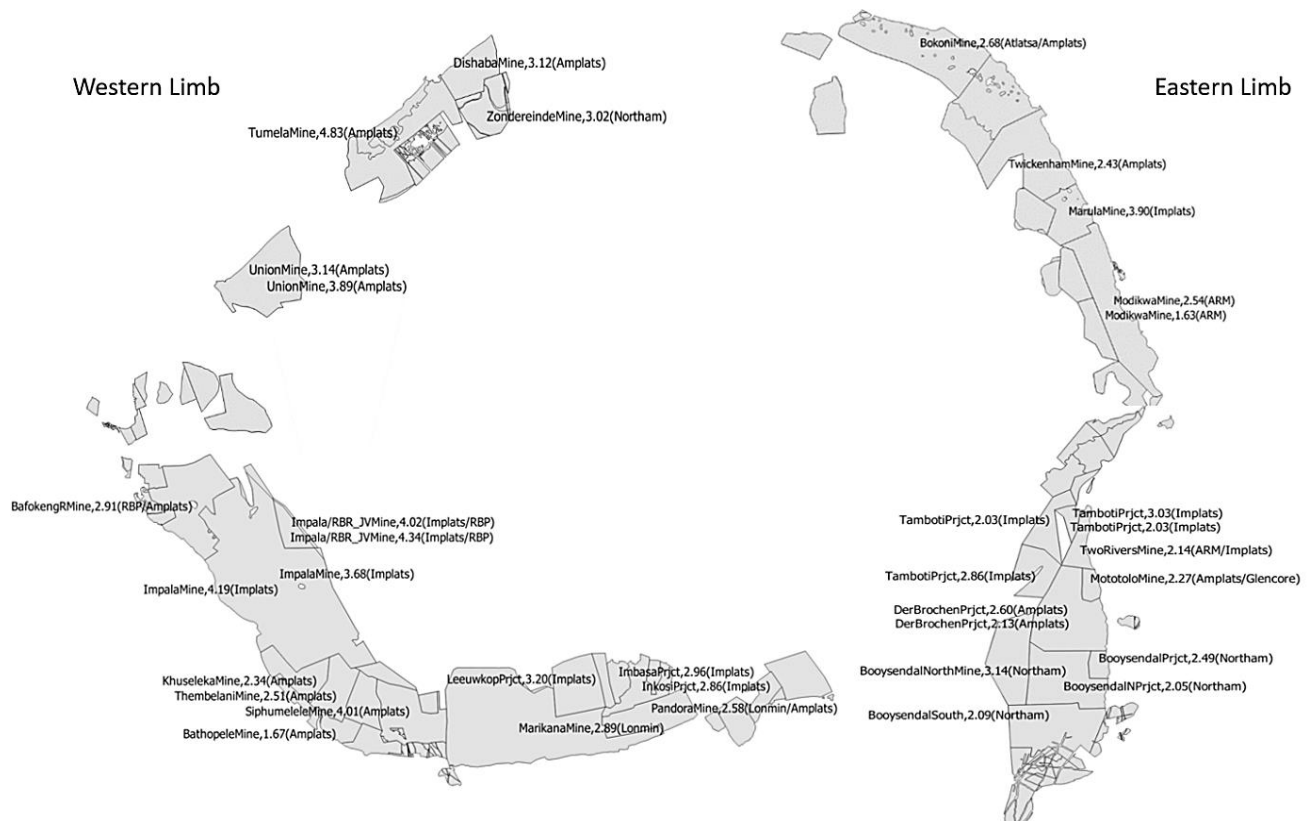
experience with BEE rounds exists, this scenario is feasible if a potent external entity like the government intervenes. The theoretical forecast posits that an I-firm paired with an opportunistic BEE partner would result in diminished investment. Notably, opportunistic BEE partners might favour passive equity share agreements over collaborative mine operation ventures.

The subsequent sections outline and scrutinise Amplats' investment endeavours, succeeded by an exploration of joint venture mines.

6.3. Amplats 100% owned mines

Amplats' prominence stemmed from high-grade platinum deposits.⁶⁰ Notably, Amplats possessed numerous untapped parcels of platinum-rich properties, strategically positioned on both the western and eastern flanks of the platinum belt (refer to Figure 14).

Figure 14 – The top four platinum producers in South Africa’s platinum belt



Source: Author. Data sourced from Company annual reports

⁶⁰ The grade of the ore is the amount of metal per ton of ore. The range in the platinum belt is theoretically 0-5. The writer calculates that the industry average (excluding Amplats) is 2.26. Any “mining rights” offering ores above this grade are “good strategic mining rights”.

Figure 14 above shows the mines of the top four platinum producers, along with some BEE joint ventures, which are detailed later. The numbers next to each mine signify the average grade of platinum, showing that Amplats had accumulated high grade assets that it intended to own and operate on a 100 per cent basis. These assets are the basis of its high level bargaining with the ANC government, set out in the following section.

6.4. Tracing the “package deal” with the government

By 1995, Amplats had acquired more than 80 per cent of the known platinum mineral rights in the platinum belt.⁶¹ The looming mining law, which gained prominence in 1998, posed a threat to the extensive platinum mineral rights it had acquired. While Impala's competitors and potential new entrants supported changes to the mining law, Amplats faced considerable risk.

As part of its expansion strategy, but also to signal cooperation and to confirm its importance to the platinum industry, on 16 May 2000 Amplats announced a massive expansion plan to increase production from 2 million ounces to 3.5 million ounces by the end of 2006, for R12.6 billion in 2000 money terms (Amplats, 2000a). The strategy involved developing new and existing mines through substantial exploration efforts in the platinum belt. Notably, Amplats stressed its commitment to "meaningful black economic empowerment" (Amplats, 2000a). However, this intent alone did not eliminate the lingering threat of property expropriation by the government .

On December 18, 2000, Amplats entered into a distinctive agreement with the Department of Minerals and Energy (DMR), characterised as a "package deal."⁶² Under this arrangement, Amplats relinquished a significant portion of its mineral rights in the Limpopo province (Amplats, 2000b).⁶³ In return, Amplats secured tenure certainty for its existing mines and a select group of promising deposits concentrated in the eastern limb of the platinum belt. These leases were valid for an initial 25-year term, extendable for an additional 25 years. Additionally, Amplats agreed to pay a 1.5 per cent royalty based on 80 per cent of the concentrate's value to the state (Amplats, 2000c). The government's condition mandated

⁶¹ Aided by the 1991 Minerals Act which, amongst others, facilitated the transfer of state-owned mineral rights.

⁶² Up to 2009: Department of Minerals and Energy. In 2009 it became the Department of Mineral Resources when the Department of Energy was created. In 2019 the two departments were reunited to create the Department of Minerals and Energy.

⁶³ In specific terms, Amplats cancelled their previous agreements with the Lebowa Minerals Trust (LMT) in the Limpopo province. The mineral rights secured by the Lebowa government were transferred into the Lebowa Minerals Trust (LMT) in 1987. The LMT was effectively a corporate entity possessing mineral property in a similar manner to a private rights holder, but with the authority to negotiate these rights with third parties.

Amplats to develop its subsequent mineral assets with the incorporation of black capital ownership.

Amplats advocated for joint operations as a valid alternative to the equity-focused ownership transfer model. Despite government reservations about the joint venture approach, an agreement emerged for developing subsequent assets through production-based joint ventures with black capital. Amplats also retained the liberty to independently develop other projects within the designated areas on a 100 per cent ownership basis (ANC Policy Institute, 2012).

Assessing this corporate-level deal through the transformative-collusive spectrum introduced in Chapter 2, Table 8 evaluates Amplats' engagement with the government. Amplats scores 7 out of 9 on the transformative spectrum and -1 out of -9 on the collusive spectrum, summing up to a total of 7 points. This score reflects Amplats' proactive and credible involvement in a transformative deal with the government.

Table 8 – INSTRUMENT 2: The corporate-political deal spectrum

	Transformative deal	Score range (0-3)	Collusive deal	Score range (-3-0)	No deal	Full score	Amplats score
i	Unlocking/unbundling assets for resourcing BEE	3	Closed party-funding focused deals	-1	No deal	0	2
ii	Commitment to continuing investment	3	Rent-sharing arrangements, no commitment to investment	0	No deal	0	3
iii	Commitment to racially transforming company	2	Isomorphism tactics rather than transformation	0	No deal	0	2
	Total score	8		-1		0	7

Source: Author

The credibility of this deal stemmed from Amplats' cooperative and transformative approach, supported by substantial investment commitments. While government commitment was challenging to secure, Amplats applied legal pressure between 2001 and 2002 regarding certain aspects of the package deal. Court cases did not lead to resolution but nudged the process. For instance, Amplats reported in August 2002 that after multiple meetings with the government, agreements were honoured to process applications for specific mining lease areas, averting further court action (Amplats, 2002b).

Furthermore, government agreed to expedite the process if Amplats collaborated with two BEE partners nominated by the government. These BEE partners—Pelawan Investments (detailed in Sections 6.6.2 and 6.6.3) and Khumama Platinum (elaborated in Section 6.6.4)—played pivotal roles in the unfolding narrative, even though these ventures faced challenges.

In November 2002, subsequent to the package deal, Amplats revised its planned capital expenditure for the 2002-2006 period to R15.3 billion, with R12.9 billion directly from Amplats (Amplats, 2002c). This upward adjustment signalled Amplats' confidence in the government deal. The comprehensive picture of Amplats' investments is expounded upon in Section 6.5.

The government proceeded to allocate the areas ceded by Amplats and other mineral rights in neighbouring properties to a broadening range of emerging local capitalists, international junior explorers, and local community organisations. This presented challenges and opportunities for Amplats. The challenges were threefold. First, the package deal was not a done deal, and required credible partnerships for sustainable investments. Second, the DMR was a site of struggle between competing ANC elite (factional) interests over “who is the chosen partner”.⁶⁴ How to navigate this was an important balancing act. Third, the properties that Amplats had to cede were important to Amplats in so far as the company wanted to control platinum supply into the market.

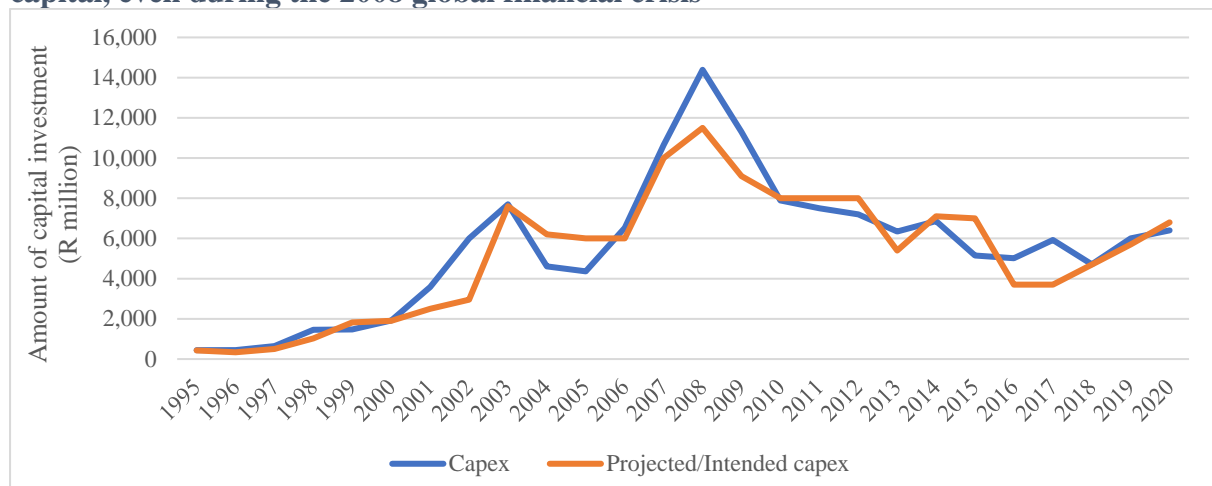
The opportunities were also threefold, mirroring the challenges. First, there was a package deal rather than no deal. This meant that though ceding some mineral rights, Amplats kept control of its largest assets and properties, thus maintaining its position as the world's largest platinum producer. Second, there was an opportunity to bring in sufficiently well connected or protected partners that would champion the transformation imperative. Amplats could see a win-win situation. Linked to this point, it appears that substantial ownership of a competitor platinum mining company, Northam, enabled Amplats to “do empowerment” by transferring its Northam shares to strategic ANC and DMR-connected partners it wished to keep at arm's-length, namely, Tokyo Sexwale (See Section 6.6). Third, the rules of the game did not exclude opportunities to make deals with international entrants. Deals with these partners would give Amplats some control over the supply side dynamics of platinum mining in South Africa. Unlike BEE partners, these partners would come into deals with funding, and business and mining experience.

⁶⁴ See Appendix to Chapter 7 for a brief discussion on the “DMR as a conduit of ANC political factions”.

6.5. Amplats' investment performance following the corporate-political level deal

Amplats' substantial investment plans, introduced in 2000, were successfully realised. The investments encompassed Amplats' wholly-owned assets, BEE joint ventures, and international partnerships. This section evaluates the broader investment performance of Amplats and subsequently summarises the investment in its 100 per cent owned mines.

Figure 15 – Amplats investment success: Amplats, on average, exceeded its projected capital, even during the 2008 global financial crisis



Source: Author. Data from Amplats annual reports, 1995 to 2020

Figure 15 depicts the expansion of capital investment by Amplats, particularly evident between 2000 and 2008.⁶⁵ Even beyond this period, Amplats maintained a positive investment trend, with an approximate annual investment of R5 billion .

However, assessing investment performance requires more than just nominal capital investment figures. The key is to gauge whether Amplats met its investment targets in line with the investment demands of its mines. One effective approach is to compare annual intended investment with actual investment to assess whether Amplats fulfilled its commitments and aligned with the commodity price boom. Figure 15 provides both intended and actual investment data, illustrating the alignment between Amplats' commitment and actual investment. Although not all asset-level deals materialised successfully, those that did receive subsequent investment support, reinforcing the narrative of successful patient capital partnerships.

⁶⁵ Amplats linked the downward revised investment since 2008 to the global economic downturn, delaying some investments and pursuing cost-cutting efficiency gains in others (Amplats, 2009a).

6.5.1. Mine level investment at Amplats' mines

This subsection dissects Amplats' overall investment down to the mine level, focusing solely on its wholly owned mines and excluding stay-in capital. The analysis covers two periods: the pre-2003 period, preceding the implementation of the new mining law, and the 2004 to 2018 period.

Table 9 – Planned capital investment projects in Amplats' mines, 1993-2003

Mine	No of Projects/ Investments	No of Completed Projects	Total Intended/Projected Investment (Rm)	Total Capital Expenditure (Rm)	Variation (Rm)
(1)	(2)	(3)	(4)	(5)	(6)
1 Amandebult (Tumela and Dishaba)	1	1	680.6	1,434.9	+754.3
2 Bokoni (Lebowa)*	1	1	249.6	738.3	+488.7
3 Mogalakwena	1	1	1,057.6	1,209.9	+152.3
4 Rustenburg Section (Khuseleka, Khomani and Siphumelele Mine, Thembelani, Bathopele)	1	1	4,200.5	4,938.1	+737.6
5 Twickenham	1	1	3,050	983	-2,067
Total	5	5	9,238.3	9,304.2	65.9

Source: Nedbank 2016. *Note that the Bokoni (Lebowa) mine was 100% owned during this period until Amplats converted the mine to a joint venture with Pelawan (Anooraq).

Table 9 documents the mines (column 1), the number of investment projects per lease area, whether those projects were completed or not by 2003 (column 3), and the variation between projected and actual investment (column 6). The results show Amplats managed to complete all its investment commitments during this time, except for the Twickenham project. This project was one of the lease areas the government had wanted Amplats to invite a government-elected BEE partner. This compromised Amplats' plans on the project, as detailed in Section 6.5.

Table 10 – Planned capital investment projects in Amplats' mines, 2004 to 2018

Mine	No of Projects/ Investments	No of Complete d Projects	Total Intended/Projecte d Investment (Rm)	Total Capital Expenditure (Rm)	Variation (Rm)	Current Status
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 Amandebult (Tumela and Dishaba)	4	2	2,015	11,014	+8,999	Operational
2 Mogalakwena	5	4	12,505	24,959	+12,454	Operational
3 Rustenburg Section (Khuseleka, Khomani and Siphumelele Mine, Thembelani, Bathopele)	8	6	9,080	15,662	+6,582	Sold to Sibanye Gold
4 Twickenham	1	1	7,100	4,921	-2,179	Care and Maintenance in 2016
Total	18	13	30,700	56,556	25,856	

Source: Nedbank 2016 and Amplats annual reports 2016-2018.

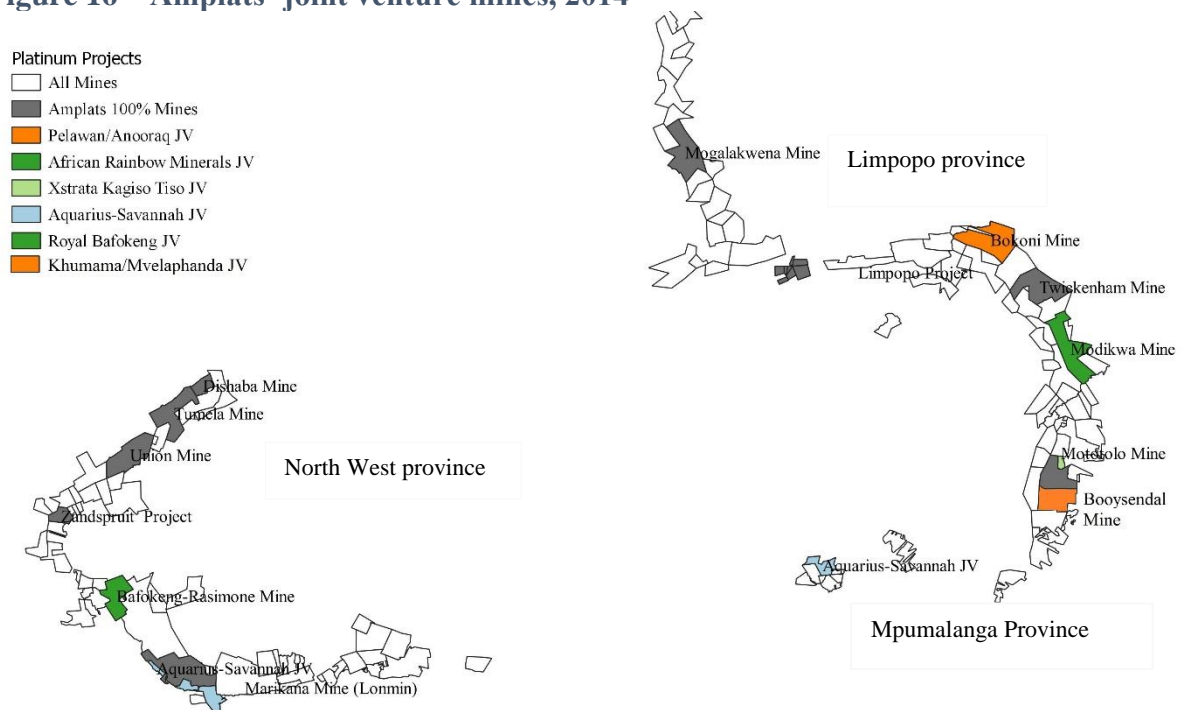
Table 10 presents the mine level investments for the period 2004 and 2019. During this period, Amplats had several greenfield and brownfield projects around its properties, each of which required repeated tranches of investment. A total of 13 of the 18 projects were completed (column 3 compared with column 2). The investment sunk in the projects was generally positive and above projected investments (column 6). The exception remained the Twickenham asset.

In conclusion, Amplats consistently maintained high absolute investments in its wholly owned mines. These mines were reinforced by the government deal and the presence of BEE joint ventures in other mines.

6.6. Asset level deals with South African partners

This section studies the asset level partnerships and deals of Amplats. The section is organised by partnerships with domestic capital/entrants. Within each of these groups of partnerships, the order of presentation will proceed according to tiers of investment, from first-tier to fourth-tier investments.

Figure 16 – Amplats’ joint venture mines, 2014



Source: Author, using QGIS software. Data from (Zientek et al., 2014).

Figure 16 shows a map of the joint ventures of Amplats in 2012. The majority of the deals with BEE are located on the eastern side of the platinum belt (i.e., Modikwa, Bokoni, Mototolo),

where Amplats gave up its properties to the government. On the western side of the belt, there is one BEE partner, the Royal Bafokeng (covered in Section D), and one international partner, Aquarius. The deals and findings are summarised in Table 11.

Table 11 – Summary of Amplats’ asset level deals and investment outcomes

Year of deal	Asset	Partner	Details of plans	Outcome in 2018
Domestic partnerships				
2001	Modikwa mine	African Rainbow Minerals	Deal began in 2001 over a greenfield investment project, the Modikwa mine. The initial investment was R1.58 billion in 2001 terms. The mine was active in 2002, operated by the BEE partner, ARM.	First Tier, t=1 Successful in investment and transformation
2002	Twickenham mine	Initially, Pelawan	A greenfield investment by Amplats. The government injected Pelawan into the project. The partnership failed.	Second Tier, z=2, t=0 Moderately successful. Deal crumbles.
2003	Ga-Phasha project	Pelawan	This was meant to be a greenfield project developed by Pelawan in partnership with Amplats. The deal failed to materialise.	Fourth Tier, z=1, t=0 Unsuccessful. Investment
2007	Bokoni mine	Pelawan	This was a compromise deal. Amplats transferred 51% of its Bokoni mine to be operated by Pelawan. Amplats sunk sizeable investment as part of the deal. Pelawan failed to operate the mine despite Amplats’ interventions.	Second Tier, z=2, t=0 Moderate investment, but underlying deal unstable.
2002	Booyendal project	Initially, Khumama, then Mvelaphanda	This was meant to be a greenfield project developed on a joint-venture basis with Khumama, under the “package deal”. Khumama sold its rights to Mvelaphanda. However, the deal failed to take off. Amplats sold its shares to Mvelaphanda in 2007, a deal that concluded in 2009.	Fourth Tier, z=1, t=0 Unsuccessful. Investment does not materialise under the Amplats stable.
International partnerships				
2005	Mototolo mine	Xstrata	The deal between Amplats and Xstrata was to develop a medium sized mine in the eastern limb of the platinum belt. The deal kept stable (also in the shadow of a politically well-connected partner), supported by requisite subsequent capital investment.	Second Tier, stable deal
2003	Kroondal and Marikana	Aquarius	The Amplats-Aquarius deal was essentially a pooling and sharing agreement over two mines. The partnership worked well, supported by requisite subsequent capital investment.	Second Tier, stable deal

Source: Compiled by author.

The summarised outcomes in Table 11 are assessed using Instrument 3 (firm/asset level deal success spectrum) developed in Chapter 2. This instrument categorises deals based on investment tiers, stability of the deal, and transformative results. The findings indicate that BEE deals resulted in investment at the mine level within the patient capital paradigm. However, the level of success varied, mostly driven by the quality of the BEE partner and their ability to ensure stability and certainty. Conversely, the deals with international partners were generally stable, focusing on medium-sized mines with modest subsequent investment.

The following subsections provide a detailed chronology of the specific deals and their outcomes, tracing their progression and investment patterns. This process tracing aligns with

the hypothesis and aims to capture the evolution of each deal and its parallel investment trajectory.

6.6.1. The Modikwa mine deal with African Rainbow Minerals

Tracing the Modikwa deal

- Amplats conducted an exploration program in the late 1990s, mainly on the eastern side of the platinum belt, where they eventually ceded most of their mineral rights.
- Amplats secured the Modikwa area on a joint venture basis with ARM, owned by Patrice Motsepe (Amplats, 1998, 1999).
- In 1998, after completing exploration, Amplats announced its plan to build the Modikwa mine, with full production targeted by 2003 (Amplats, 1998, 1999).
- By 2000, Amplats disclosed an initial capital investment requirement of R1.35 billion to develop the mine, intending to start operations in 2002 (Amplats, 2000c: 19).
- Mining authorisation was granted in 2000, and in parallel, negotiations with ARM for a 50 per cent joint venture partnership were underway (Amplats, 2000c: 19).
- The deal with ARM was effective in 2001, with both parties agreeing to contribute half of the required investment (IOL, 2004).⁶⁶
- Modikwa commenced operations in 2002, meeting the original target date. It marked the first instance of Amplats purchasing metals in concentrate from a black-owned platinum producer (IOL, 2004).⁶⁷
- ARM paid back Amplats its loan of R704 million, a unique aspect showcasing ARM's capacity to generate revenue from productive activity (IOL, 2004).

Figure 17 – the Modikwa mine and concentrator in 2003



Modikwa mine, 2003



Modikwa concentrator, 2003

Source: Amplats annual report, 2003.

Between 2004 and 2010, Modikwa entered its second phase of expansion, staying ahead of schedule and extending the mine's life by approximately 40 years. The partnership remained

⁶⁶ However, it took two years to get the contract between Amplats and ARM signed. Without an agreement, the banks would not advance the project any money. As such, Motsepe sunk in R300 million initially after selling ARMgold shares and then a further R200 million to give the banks comfort for the R700 million loan needed for the empowerment partners' contribution to the capital expenditure for the project (IOL, 2004).

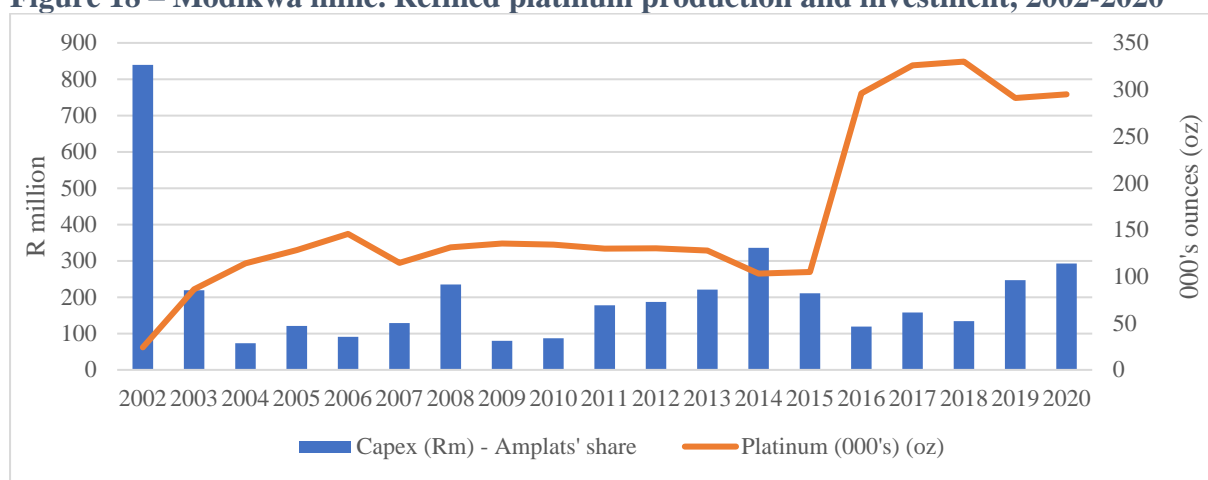
⁶⁷ Amounting R121.9 million.

strong, leading to the construction of a chrome plant in the Modikwa area in 2019, upgrading the mine to recover both platinum and chrome (Amplats, 2019, 2020).

Conclusion – How does the deal fare in light of the hypothesis?

The Modikwa mine deal demonstrates a successful outcome within the rules-deals paradigm. The partnership between Amplats and ARM, backed by Patrice Motsepe's political connections, exemplifies productive collaboration with a BEE partner operating the mine. ARM's ability to pay back loans from productive activity further differentiates this partnership.

Figure 18 – Modikwa mine. Refined platinum production and investment, 2002-2020



Source: Author, using Amplats’ annual reports, 2002-2020. Note: The investment in the graph shows the capital investment by Amplats only. Likely, the investment doubles when including investment from African Rainbow Minerals. The researcher avoided adding the reported investment by ARM to avoid possible double counting, because in some years the reports do not explicitly state their share in the investment.

Figure 18 shows the trajectory of the Modikwa mine’s production performance. The investment trajectory of the Modikwa deal aligns with the hypothesis that patient I-firm and E-firm partnerships lead to sustained investment.

Table 12 – Amplats’ share of investment in the Modikwa deal

Asset	Intended/ announced investment (+year)	Actual Investment 2001-2007	Actual Investment 2008-2014	Actual Investment 2015-2018	Total
Modikwa mine	2001. Initial investment of R1.58 billion	R2,242.8 million compared to R1,626 million intended investment	R1,324 million	R1,162 million	Initial investment and subsequent investment well above initial size of deal. Amplats’ share amounted to c.R4,728.8 million in the Modikwa mine. Together with ARM’s share, the investment estimates to R9,457.6 million
Tier result		First Tier + t=1 investment , deal with multiple rounds of large investment, develops into a thriving productive BEE enterprise			

Source: Author's calculations from Amplats' annual reports and company announcements between 1998 and 2018.

Table 12 summarises the trajectory of the capital investments in Modikwa from Amplats. The consistent and substantial investment in the Modikwa mine showcases the strength of the partnership and the transformative potential of such arrangements. This case aligns with the First Tier investment typology, reflecting multiple rounds of large investment and the development of a thriving productive BEE enterprise.⁶⁸ This case study serves as a valuable example of how patient I-firm and E-firm partnerships can yield significant investment and successful transformation outcomes.

The following section traces the government-sponsored BEE partners, the beneficiaries of the “package deal”.

Background to the Government-sponsored deals: Pelawan and Khumama deals

The subsequent deals discussed involve government-sponsored partnerships, where Amplats was required to engage with specific BEE partners as part of the broader package deal.

Pelawan Deal Background

- Pelawan Investments was led by Tumelo Motsisi and Harold Motaung. Motsisi was associated with Kopano Ke Matla Investment, the investment arm of COSATU (Anooraq, 2011).⁶⁹ Motaung was the chief director (mine inspectorate) of the DMR, the same department responsible for issuing mining licenses.
- Amplats was expected to develop the Twickenham mine with Pelawan, with hopes of combining neighbouring rights for a larger mine.
- However, Amplats chose to develop a smaller mine independently. Pelawan merged with Canadian miner Anooraq, expanding Amplats' Bokoni mine and a new project called Ga-Phasha (Anooraq, 2011).

⁶⁸ It is worth noting that part of the “package deal” in 2002 forbade Amplats from undertaking further empowerment deals with ARM (ANC Policy Institute, 2012). However, ARM is in a similar joint venture with Implats at the Two Rivers mine in Limpopo. The joint venture happened around the same time as the Modikwa venture.

⁶⁹ COSATU: Congress of South African Trade Unions, a trade union federation in South Africa that forms part of what is called the “Tripartite Alliance” between the ANC, COSATU, and the SACP (South African Communist Party). Mintek: a state owned enterprise specialising in mineral research, formerly known as “Council for Mineral Technology”.

- Twickenham evolved separately, eventually becoming Amplats' only unsuccessful 100 per cent owned mine.

Khumama Deal Background

- Khumama, led by Nomazizi Mtshothisa, was allocated prospecting rights in the Booyendal area. Mtshothisa was also involved in the ANC Fundraising Trust and was the ex-wife of Cyril Ramaphosa (Robinson & Brümmer, 2006).
- Khumama's rights were acquired by Mvelaphanda Resources, founded by Tokyo Sexwale. Sexwale was a former ANC insider who transitioned into business (Mining Weekly, 1999; Engineering News, 2001).
- Mvelaphanda Resources acquired a majority stake in Northam Platinum, and the deal was strategically facilitated by Anglo to secure development rights contiguous to Northam's operations (Koen, 2000).
- After Khumama sold its rights to Mvelaphanda, the DMR remained interested in developing these rights as part of the package deal (ANC Policy Institute, 2012).
- Anglo and Amplats exited the deal by selling their shares in Northam and the Booyendal project to Mvelaphanda (Mvelaphanda, 2008).

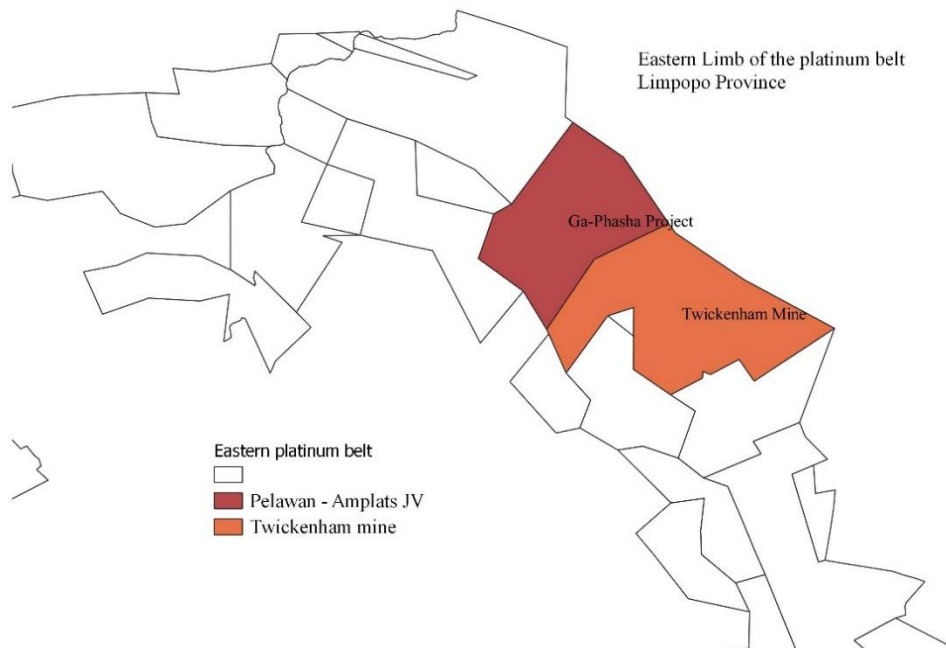
These government-sponsored deals were complex, involving various BEE partners and strategic manoeuvres to fulfil empowerment requirements and development goals set by the government. The subsequent sections will provide a closer look at these deals and their outcomes.

6.6.2. The Pelawan deal I: Twickenham mine investment

Tracing the Twickenham deal/investment

- In 2000, Amplats completed an exploration program for the Twickenham area and planned to build a mine by 2001. It applied for a mining license from the government.
- In 2002, Amplats reached a deal with the government where the DMR awarded mineral rights to Pelawan adjacent to Twickenham (Amplats, 2002a: 41). Pelawan would cede the rights to Amplats and enter a 50:50 joint venture with Amplats under the "Gaphasha joint venture" (See Figure 19).

Figure 19 – The Twickenham and Ga-Phasha properties



Source: Author, using QGIS software. Data from (Zientek et al., 2014).

- In 2003, Amplats reported a decision to slow down the Twickenham project due to external factors and changes in mine layouts after co-opting BEE partners.
- In 2004, Amplats decided to develop a smaller mine independently (Amplats, 2004: 63). In 2005 and 2006, the project expanded to include a neighbouring farm.
- In 2007, Amplats declared a full-scale mine, and the projected capital expenditure increased to R5.9 billion, later adjusted to R7.1 billion in 2008.

Figure 20 - A view of Twickenham's Hackey Shaft



Source: Amplats annual report 2007

- In 2009, the project was delayed due to the global economic downturn. In 2010 and 2011, steady state production was deferred to 2018 and then 2023.
- In 2016, Twickenham was put on care and maintenance due to industry challenges.

Conclusion – How does the deal fare in light of the hypothesis?

The Twickenham deal is an example of a deal where credible commitment remains unresolved. The start-stop nature of the investment correlates with the changing uncertainties associated with the Pelawan deal. This becomes much clearer upon tracing the next Pelawan deal, in the following subsection. Before that, the following examines the investment trajectory of the Twickenham investment.

Table 13 – Twickenham-Amplats’ investments

Asset	Intended/announced investment (+year)	Actual investment 1994-2000	Actual Investment 2001-2007	Actual Investment 2008-2014	Actual Investment 2015-2018	Variation
Twickenham	2001. Initial capital expenditure is estimated at R2,954 billion (in 2002 money terms) (Amplats, 2001). Steady state expected 2006.	Mine does not exist yet	R980.2 million compared to R1,431.5 million	R4,617 million (<i>R4,535 million spent on developm’t and expansion</i>)	R304 million spent in 2015, no investment thereafter	cR5901.2 million actual investment by end 2015, compared to R7,900 million required
	2002. DMR identifies Pelawan as BEE partner (Amplats, 2002d).		Amplats intended to spend			
	2003. Capex requirement upped to R3.4 billion, post DMR discussions. Initial shaft sinking takes place, as well as general mine infrastructure.					
	2007. Capex requirement upped to R5.9 billion.					
	2008. Capex requirement upped to R7.1 billion.					
	2012. Capex requirement upped to R7.9 billion					
Total	By 2012, Amplats needed a cumulative R7.9 billion to get Twickenham to steady state		Twickenham stopped producing in 2016. The investment was not so successful, not certain if there is a link with Pelawan.			
Tier	Second Tier + z=2, t=0: deal with multiple rounds of modest investment, eventually crumbles					

Table 13 documents the investment trajectory of the Twickenham project. Studying the table, although the initial sinking of a shaft took place in 2003, large investments into Twickenham only occurred post 2008, after partial resolution of the tension between Amplats and Pelawan/government. This sinking of large investment was six years after the start of the deal, a story of “missing the boom” because the deal with Pelawan affected the certainty behind the Twickenham project. That said, for reasons that remain unclear, the mine was not much of a success despite the belated large investment by Amplats between 2008 and 2014. The outcome by 2016 was an investment that failed to obtain enough traction, and hence was placed on care and maintenance. Because repeated modest investment was sunk into the mine, it is classified

as a second-tier investment, but with a deal that eventually crumbles, and no transformation as a result.

The following subsection traces the other part of the deal with Pelawan as part of resolving the Twickenham deal that did not take off.

6.6.3. The Pelawan deal II: The Ga-Phasha and Bokoni deal

The Ga-Phasha and Bokoni deal between Amplats and Pelawan involved several stages:

- In 2002, during negotiations with Pelawan, Amplats entered into an exploration agreement with Anooraq, a Canadian investor (Amplats, 2002e).
- In 2003, it was announced that Pelawan was in negotiations with Canadian capital for funding options (Amplats, 2003a: 49).
- In 2004, Pelawan facilitated a reverse takeover of Anooraq, making it the first BEE-controlled corporation with an offshore primary listing in North American capital markets (Amplats, 2005a).⁷⁰
- In 2006, the DMR pressured Amplats to make progress on the stagnant Pelawan deal due to BEE target deadlines.
- In 2007, Amplats transferred 51 per cent of its Lebowa mine (renamed Bokoni) to Pelawan, along with other projects Ga-Phasha, Boikgantsho, and Kwanda (Amplats, 2009b) (See Figure 21).
- The management of the Bokoni mine operations was also transferred to Pelawan.
- The deal became effective in June 2009.

⁷⁰ Amplats notes that a new BEE partner entered to replace Pelawan. The BEE partner was Plateau Resources. A search on *Who Owns Whom* reveals that the same Harold Motaung and Tumelo Motsisi (noted earlier above) are the owners. More tracing shows substantial cross-shareholding, making the companies one and the same. It appears that to establish a company base in South Africa, Anooraq absorbed Pelawan, then Pelawan registered as Plateau. For consistency, this discussion will continue using Pelawan to refer both Anooraq (and the new name Atlatsa) and Plateau.

Figure 21 – The four properties forming part of the Amplats-Pelawan deal in 2007



Source: Author, using QGIS software. Data from (Zientek et al., 2014).

Soon after Pelawan took over Bokoni, the Lebowa/Bokoni deal faced operational challenges, high fatalities, and financial struggles. Amplats announced a refinancing and restructuring of Pelawan and the Bokoni mine in 2011, which involved Amplats acquiring parts of the Ga-Phasha and Boikgantsho projects (Amplats, 2011). Amplats also played a more advisory role in Bokoni's management.

However, Bokoni continued to struggle and incur losses.⁷¹ In 2014, Amplats announced plans to exit the Bokoni joint venture due to its poor performance and as a way to create value for Amplats (Amplats, 2014). Bokoni was placed on care and maintenance in 2017, and Amplats officially classified this as divestment (Amplats, 2017: 46).

In 2020, Amplats reported that it was looking for a new owner for Bokoni. In 2021, ARM, led by Patrice Motsepe, acquired Bokoni, aiming to revive its operations (Amplats, 2021) .

⁷¹ The mine made an accumulated loss before tax of R3,73 billion between 2010 and 2017 (Amplats annual reports, 2011-2017, authors' calculations).

Conclusion – How does the deal fare in light of the hypothesis?

The Ga-Phasha and Bokoni deal demonstrates challenges and complexities. The Ga-Phasha project did not materialise, likely due to the imposed partnership between a patient I-firm (Amplats) and an opportunistic BEE partner (Pelawan). This aligns with Typology B's prediction that such a match would yield low investment.

The Bokoni deal involved significant investment during the early stages, with expansion in 2005 and 2009. However, the mine's operational challenges led to its decline, and Amplats eventually exited the venture. Despite continued investment, the project faced difficulties and ultimately crumbled.

Table 14 – The Ga-Phasha and the Bokoni deal in relation to investment

Asset	Intended/announced investment (+year)	Actual investment 1994-2000	Actual Investment 2001-2007	Actual Investment 2008-2014	Actual Investment 2015-2018	Variation
Ga-Phasha	Not stated	No investment	No investment	No investment	No investment	
Bokoni/Lebowa	The deal transferred an already existing mine. The test is whether Amplats continued substantial investment into the asset post the deal	R167.48 million compared to c.R197.9 million (underinvestment)	c.R1,733.8 million (maintenance = R1070.3 million)	c.R1,679 million	c.R0.00	Positive until 2014
Tier (Ga-Phasha)	Fourth Tier + z=1, t=0: deal but no subsequent investment, deal remains stagnant, failed transformation attempt					
Tier (Bokoni)	Second Tier + z=2, t=0: deal with multiple rounds of modest investment, eventually crumbles, failed transformation effort					

Source: Author's calculations.

The Ga-Phasha deal remained stagnant with no investment, categorising it as a fourth-tier investment. The Bokoni deal initially involved substantial investment but faced operational issues and eventually crumbled, resulting in a second-tier investment that failed to achieve transformation (See Table 14).

As mentioned earlier, the Bokoni mine was bought by Motsepe's African Rainbow Minerals in December 2021, with plans for restructuring and expanding the mine (Ryan, 2021).

6.6.4. The Booyensdal deal: Khumama and Mvelaphanda joint venture

Tracing the Booyensdal deal

The Booyensdal deal involving Khumama, Mvelaphanda Resources, and Amplats unfolded in the following manner:

- In early 2000, Khumama was granted prospecting rights in the Booyensdal area (Mining Weekly, 2005).
- In 2002, the DMR secured Amplats as an anchor investor for the Booyensdal project.⁷²
- In 2003, Amplats and Khumama signed an agreement to develop the Booyensdal project (Amplats, 2007).
- Shortly after, Khumama sold its stake to Mvelaphanda, making Mvelaphanda the new joint venture partner (Le Roux, 2004).⁷³
- Studies and negotiations for the Booyensdal project continued, but no investments were made (McLachlan, 2006)..
- In 2007, Amplats sold its 50 per cent stake in the Booyensdal project to Mvelaphanda, making Mvelaphanda the sole owner.⁷⁴

Conclusion – How does the deal fare in light of the hypothesis?

The Booyensdal deal experienced several transitions between BEE partners but ultimately failed to attract sufficient credible commitment from Amplats to facilitate investment. The deal involved Khumama initially and later Mvelaphanda as BEE partners. Despite various announcements and negotiations, no investments were made to develop the Booyensdal project. This aligns with the hypothesis of opportunistic BEE partners leading to fourth-tier investments with stagnant deals that fail to achieve transformation (See Table 15).

⁷² Similar to the Pelawan deal, Amplats had to restructure and redesign its original greenfield mine plan for the Der Brochen project, to accommodate the adjacent Booyensdal joint venture.

⁷³ Shortly after Khumama signed the deal, Khumama approached Sexwale's Mvelaphanda to buy it out of the deal, citing its own lack of technical and financial capacity (Le Roux, 2004). In early 2004, Mvelaphanda acquired the entire issued share capital of and loan accounts against Khumama Platinum for R313 million. Khumama received R80 million cash plus a possible "upside" to be determined in future (Prinsloo, 2010). Mvelaphanda sold the 50 per cent Booyensdal stake to Northam for an amount of R460 million, which was converted to shares in Northam. The transaction pushed up Mvelaphanda's share in Northam to 34 per cent at the time, officially making Mvelaphanda the single-largest shareholder in Northam in 2004.

⁷⁴ Amplats made this decision after the meeting with the DMR to review the company's progress on meeting empowerment targets. The DMR found Amplats wanting on the Booyensdal deal progress. To remedy the matter, Amplats announced the sale to Mvelaphanda Resources, making Mvelaphanda Resources a 100 per cent owner of the project.

Table 15 – Intended versus actual capital investment expenditure on the Booyesendal project

Company investing in Booyesendal	Intended/announced investment (+year)	Actual investment 1994-2000	Actual Investment 2001-2007	Actual Investment 2008-2014	Actual Investment 2015-2018	Variation
Amplats	None ever explicitly stated by Amplats, but Northam required over R4 billion to develop the mine (Marais, 2018)	n/a	R0	R0	R0	R0
Tier	Fourth Tier, z=1, t=0					

Source: Author's calculations from Amplats' Annual reports.

The Booyesendal deal's history reflects the challenges and difficulties that can arise when partnerships between I-firms and BEE partners are characterised by opportunism and lack of credible commitment. This case study contributes to the understanding of BEE deals and their impact on investment and transformation within the mining sector.

6.7. Asset level deals with international partners

This section explores the deals that Amplats concluded with international entrants in the platinum belt. These deals are an important part of the empirical study of Amplats' deals. They contribute variation in the types of partners with which Amplats engaged, and they explain investment outcomes in the platinum belt.

6.7.1. The Amplats-Xstrata partnership on the Mototolo mine

The Amplats-Xstrata partnership on the Mototolo mine stands out as an example of a successful international collaboration aimed at developing and operating a platinum mine.

Tracing the Mototolo deal

- Discussions between Amplats and Xstrata to develop the Mototolo mine began in 2003, with formal board approvals in July 2005.
- A 50:50 joint venture was established between Amplats and Xstrata to build and operate the Mototolo mine.
- The partnership aimed to develop a mechanised mine with its own concentrator, with Xstrata handling mine development and operation, while Amplats focused on the concentrator.
- The mine became operational in 2006, with steady-state production targeted by the end of 2007.



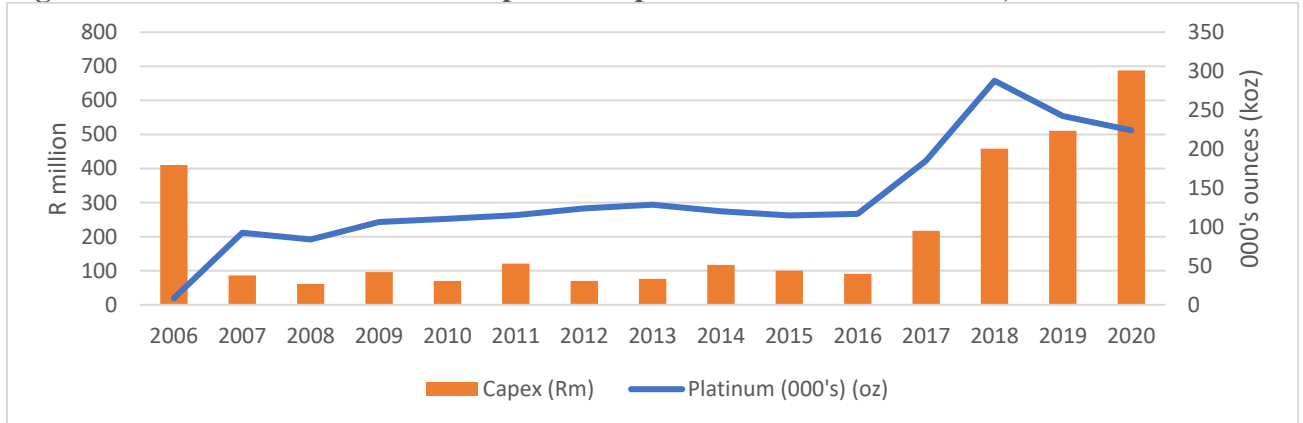
The new Mototolo concentrator

- The joint venture demonstrated successful investment and operational performance, sustaining steady investment over the years and successfully navigating challenges such as platinum strikes in 2012 and 2013.
- After more than a decade of successful investment and operation, Amplats bought out Xstrata's share of the Mototolo mine in 2018 to extend its own operational control.

Conclusion – How does the deal fare in light of the hypothesis?

In the case of the Amplats-Xstrata deal, a strong feature of the deal is that by partnering with an international peer, the deal removed for Amplats the internal pressures associated with BEE partners, such as political risk exposure, funding shortfalls, and lack of experience. In addition, the responsibility for getting a BEE partner into these deals fell on the international partner. In many cases, such as with Xstrata, the BEE partners were connected to the ANC political party. But the argument behind the international deals, in the Amplats' world, is that credibility in the deal arises from the insulation of these deals from local fragilities, once a connected BEE partner and a compliant percentage share to the partner is concluded. This model is useful when reflecting on foreign direct investment, and how partnerships with domestic capital (in the mining case) can facilitate investment in effective ways, de-risking the deals substantially, while, in the case of platinum, managing supply.

Figure 22 – Mototolo mine - refined platinum production and investment, 2006-2020



Source: Author using Amplats’ annual reports, 2006-2020. Note that the investment figures are only Amplats’ share of capital investment. Possibly the investment doubles between years 2006 and 2016 when including investment from Aquarius.

Figure 22 shows the trajectory of the Mototolo mine’s production performance. The mine was built fairly quickly, as evidenced by the steady-state trend beginning in 2007 to 2016, the period of the deal.

Table 16 – Trajectory of capital investment of the Mototolo deal

Asset	Intended/announced investment (+year)	Actual investment 2006-2010	Actual Investment 2011-2015	Actual Investment 2016-2020	Total
Mototolo	2001. Initial capital expenditure is estimated at R1.35 billion (in 2005 money terms) (Amplats, 2005b).	R723 million (Amplats’ share) Total=c.R1,446 million	R484 million (Amplats’ share) Total=c.R968 million	R1,965 million (Amplats’ share) Total=c.R3,930 million	R6,344 million investments over 15 years
Tier	Second Tier investment: deal with multiple rounds of modest investment				

Source: Amplats’ annual reports and announcements, 2001-2020

Table 16 documents the trajectory of capital investment associated with the Amplats-Xstrata deal. To get the mine built, initial investment was expected to be R1.35 billion in 2005 money terms. The subsequent investment beyond the initial investment was modest throughout the deal.

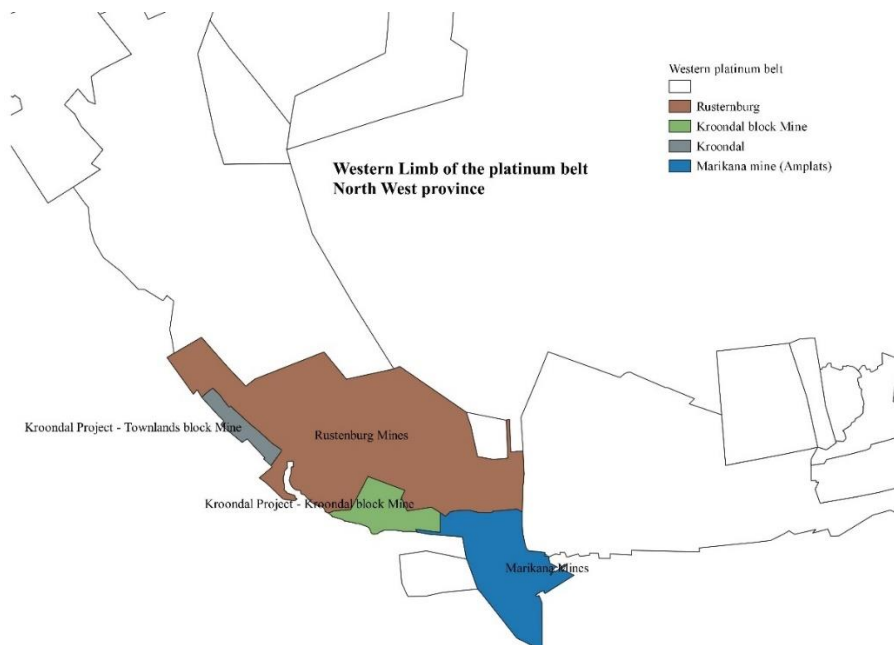
In terms of success in transformation, the international partnerships did not have transformation as a motive. Hence analysis of the extent to which deals translate into transformation must be relaxed by simply asking: to what extent do these deals facilitate capital investment in the platinum belt in South Africa?

In light of the above findings, relative to other deals in this study, the Mototolo investment was a successful second-tier investment. The following subsection studies a similar deal between Amplats and an international partner, Aquarius.

6.7.2. The Aquarius deal: Kroondal and Marikana mines

The Amplats-Aquarius deal consists of the Kroondal mine and the Marikana mine. The case study documents a deal that goes well between the two partners, starting with the Kroondal mine, and following with the Marikana mine. Figure 23 shows the outline of the properties.

Figure 23 – The properties forming part of the Amplats-Aquarius deal



Source: Author, using QGIS software. Data from (Zientek et al., 2014).

Tracing the Amplats-Aquarius deal over two mines

1. Kroondal Mine

- Aquarius Platinum developed the Kroondal mine in 1996 and production started in 1999 (Gillian O'Connor, 2001).
- In 2003, Amplats and Aquarius entered an agreement to mine contiguous properties on their respective Rustenburg and Kroondal lease areas (Amplats, 2003b).
- The partnership involved pooling assets while retaining ownership, sharing proceeds equally. Amplats provided access to a portion of its Rustenburg property, while Aquarius contributed its Kroondal property and infrastructure.

- The partnership included building a new concentrator and expanding shaft capacity, with capital expenditure estimated at around R810 million.
- Kroondal reached steady-state production by 2004, with consistent investment over the years. The partnership brought additional sales volume to both companies.
- In 2016, Amplats initially intended to exit the Kroondal deal but decided to remain when Sibanye Stillwater acquired Aquarius (eNCA, 2016).

2. Marikana mine (not Lonmin “massacre” mine)

- Based on the success of the Kroondal partnership, Amplats and Aquarius expanded their collaboration to include the Marikana property.
- The pooling-and-sharing agreement was established in 2005, and Marikana contributed to the partnership's platinum production between 2006 and 2011.
- In 2013, Marikana was closed due to limited profits and scale compared to the Kroondal mine.

Conclusion - How does the deal fare in light of the hypothesis?

The story of the Amplats-Aquarius deal is very similar to the story of the Amplats-Xstrata deal. A visible picture that emerges is that the partnerships worked straightforwardly, based on win-win production and co-investment arrangements.

Table 17 – Trajectory of capital investment of the Kroondal and Marikana deal

Asset	Intended/announced investment (+year)	Actual Investment 2003-2007	Actual Investment 2008-2012	Actual Investment 2013-2018	Total
Kroondal	2000. JV with Aquarius on Kroondal. Expansion to cost R514 million (2000 money terms). (Amplats, 2000d)	Amplats' share = R576.8 million	Amplats' share = R922 million	Amplats' share = R1,222 million	Amplats' share = R2,720.8. Total approximately R5,441.6 million
Marikana	Not stated, but PSA used existing infrastructure from Amplats and Aquarius, requiring limited investment	Amplats' share = R335 million	Amplats' share = R109 million	Amplats' share = R0 million	Amplats' share = R444. Total approximately R888 million
Tier (overall)	Second Tier: deal with multiple rounds of modest investment				

Source: Author's calculations using Amplats annual reports.

Table 17 summarises the capital investments over time on both properties. Although the table shows absolute values per five year period, the numbers indicate that relative to other deals in the study, this deal resulted in sustained moderate investment, making it a second tier

investment and above average to the macro picture of failed deals in the platinum belt during this period. The deal aligns with the hypothesis of successful deals resulting from clear win-win arrangements and credible commitment.

6.8. Conclusion

Chapter 6 pulls the theoretical material developed in the study so far, and the story that characterised Amplats as a patient firm, into an empirical investigation at the micro and nano levels. To a great extent, this is the bottom line: does the theory and the story laid out earlier empirically amount to capital investment and transformation, and how is the result explained by the rules-deals hypothesis?

What helps in increasing the credibility of the “tracing the deals method” is that the researcher does not have control over the investment results, neither does the researcher have control over the specific details and trajectory of the deals. To that extent, Chapter 6 has systematically and analytically shown an experienced Amplats (in Round Two onward) coming into the millennium with a clear deal with the government. This deal was shown to be crucial in winning space for Amplats to continue as the dominant producer of platinum in South Africa, and to isolate with tenure its core assets which were essential to the investment plans of Amplats. Both the deal with government and the asset level deals were crucial in completing a big picture platform supporting overall investment by Amplats throughout the study period.

The chapter has also investigated the specific nano level partnerships both with BEE entrants, and with international entrants. The deal with a patient BEE partner, African Rainbow Minerals, is an important finding and explanation of the process through which South Africa achieved pockets of tangible success in the BEE mining policy space. However, despite the hypothesis that contends that opportunistic BEE partners will compromise the stability of the deal, leading to low or no subsequent investment, the failure of the Pelawan deal is both surprising and disappointing. Despite the partner being “forced” on Amplats, the critical turning point in 2007 when Pelawan took over the capitalised Bokoni mine was a moment of hope where government could facilitate an opportunity for a BEE firm to become an operator. Tracing the deal makes it evident that the requisite subsequent capital investment to keep the mine going was sunk by Amplats. What was meant to be the fourth-largest platinum producer with the Bokoni, the Ga-Phasha and the two smaller projects, ended up amounting to failed effort. Viewed in light of the Pelawan deal, an alternative hypothesis that the Amplats-ARM

deal thrived on other factors such as access to capital, access to better grade of ores, or access to better infrastructure, cannot hold given the amount of capital and support that went into the government-sponsored Pelawan deal.

How did Amplats manage the risk of expropriation? Chapter 6 found compelling results that by crafting good deals, Amplats won the security of tenure of its mineral rights. Moreover, the quality of deals mattered, both for transformative rather than collusive deals with government, and transformative deals with BEE partners. The shadow of a robust rule of law emerged as an important support to the deals. When government appeared to either be delaying or shirking on the deal, Amplats could take the government to court over enforceable aspects of the deal. By so doing, the threat of the courts could facilitate cooperation from the side of government. Therefore, the role of the rule of law cannot be understated in this deals story.

Chapter 6 brought to full circle the investigation of the rules-deals hypothesis in the patient capital world. Subsequent cases in Section C and Section D will cast a comparative gaze on the findings and the mechanisms underlying the trajectories of investment and transformation. Chapter 11 will provide an overall discussion and conclusion to the case studies.

Section C – The strategies, deals and investment outcomes of patient capital

CHAPTER 7 – Crony myopic capital? Lonrho, Lonmin, and Ramaphosa

Background: Lonrho and Lonmin in 2022

Present day Lonrho is a London-based, privately-owned company established in 1998 after the unbundling of Lonrho Plc. Similar to the unbundling of Anglo, the ex-conglomerate company was split into non-mining assets that were transferred into Lonrho Africa Plc, while the mining assets were left in Lonrho Plc, which soon changed its name to Lonmin Plc – a platinum mining company. In 2013, Lonrho was purchased by Swiss billionaires Thomas Schmidheiny and Rainer-Marc Frey.⁷⁵ They delisted the company from the stock exchanges in London, Johannesburg, and the USA (Weavind, 2013). At the time of writing (2022), Lonrho describes itself on its website frontpage as:

...a privately-owned company with *patient capital* focused on investing in the growth of Africa. The company has extensive geographic presence in sub-Saharan markets with over 100 years' capital investment history. (Lonrho, 2022 emphasis added).

Present day Lonrho is not the unit of analysis of this study. Rather, it is the original company, dating back to the early 1900s, as well as its mining offshoot, Lonmin, South Africa's third largest platinum mining company until 2018. In 2019, Lonmin went defunct, and was overtaken by Sibanye Stillwater – a new large platinum mining company in South Africa formed during the restructuring of the platinum industry that followed the commodity price boom (Seccombe, 2019). That Lonmin no longer exists is precisely an outcome directly relevant to this research project's hypothesis. What follows is an analytic narrative that surfaces the corporate strategy of Lonmin Plc. However, similar to the case of Amplats, to understand Lonmin when it plays the BEE game in Round One and subsequent rounds, one must start with its origin in the early 1900s.

The narrative traces Lonrho's emergence amidst the tumultuous 1960s, marked by decolonisation, disinvestment, and widespread expropriation policies in Africa. Initially, it examines Lonrho's corporate strategy and endeavours in various African countries before shifting focus to South Africa. This exploration offers valuable insights. The narrative derives insights from Lonrho's presence across diverse African nations and varying transformation

⁷⁵ Lonrho Africa changed its name back to Lonrho in 2007.

policies.⁷⁶ These experiences culminate in Lonrho's entry into South African platinum mining, swiftly becoming the third-largest platinum producer from the 1980s onward. Drawing from decades of experience across the continent, Lonrho adeptly navigates political shifts and expropriation risks. Platinum emerges as Lonrho's pivotal asset, leading to the establishment of Lonmin plc in London. This entity becomes a major player in the global and South African platinum supply chain.

7.1. Introduction to the study of Lonrho

Anglo American comfortably fits a research approach that mainly studies the company as a unit of analysis. Lonrho is a different entity. To study Lonrho's corporate strategy is to simultaneously study Tiny Rowland, its CEO of almost five decades. This is not unusual in a personalised-dominant organisation such as Lonrho – a company closely driven by its leader. The case study is important here because of the central role of Lonmin, the platinum outshoot of Lonrho, in the platinum industry and black empowerment deals in South Africa. In particular, Lonrho introduced its own variety of black partners, and this can help us to test the underlying hypothesis of partnership affinity and investments. Thus, Lonrho's importance lies in uncovering Lonmin's corporate strategy, preferences, and networks. Furthermore, it offers insights into a form of multinational capital adept at thriving in risky geopolitical contexts, historically exiting with limited inward foreign fund flow in the South African scenario.

Drawing from extensive scholarly materials, news, and declassified intelligence reports, this section traces and analyses the corporate strategy of Lonrho. The narrative is organised using time. Round Zero traces the origins of Lonrho and its corporate strategy between 1960 and 1994. Round One (1994-2008) traces the emergence of Lonmin and how the entity manoeuvred BEE in early democratic South Africa. Round Two (2009-2012) focuses on Lonmin's partnership with Cyril Ramaphosa, in order to profile a prominent BEE partner chosen by Lonmin. The chapter finds that Lonrho/Lonmin's strategy was about pursuing targeted, personalised rent-seeking deals with ruling politicians. This is not a new finding nor is it an exception. What is useful in relation to the hypothesis and the theoretical framework (Typology A in Chapter 2) is that Lonrho had a strategy of "business is politics", not only in institutionally weak polities, but in arguably more institutionally developed African contexts. Lonrho saw

⁷⁶ Typical transformation policies were indigenisation and nationalisation policies adopted by several Africa countries. These provide some form of comparative lens to show how Lonrho dealt with these policies in various African contexts.

liberation politics (i.e., liberation parties/heroes turned governing parties) as driven by the same incentives, regardless of institutional development. The company would learn to apply this reading of liberation politics to South Africa during democratisation, adapting itself politically to South Africa's rule-based BEE policy, thus playing successfully on the material interests of the emerging black elite. Through its experiments with navigating around BEE rules and failures in Round One, Lonrho would eventually, in Round Two, find a suitable BEE partner in Cyril Ramaphosa. Ramaphosa would prove crucial in providing the "revolving door" between business and state, when Lonmin fell into the same predicaments into which Lonrho had historically fallen. This would lead to the Marikana massacre of 34 mine workers in Lonmin's mine by the South Africa Police Service. In an active democracy, this received the kind of attention that led to the fall of both Lonmin and Ramaphosa's Shanduka empire.

The chapter draws some important conclusions. First, an opportunistic I-firm thrives through a strategy of collusive deals. Second, the strategy of collusive deals can work effectively for an opportunist both in weak and in relatively strong governance polities. This is because even in relatively strong governance polities, politics and political parties may function in personalised ways, leaving room to co-opt leaders into collusive deals. However, in the case of South Africa, the rule of law was important in limiting the adverse effects of opportunism, in addition to buttressing asset level deals. Thirdly, Lonrho had a specific strategy of seeking high-return, front-loaded deals – and was mainly financing its activities through skilled accounting and locally-generated capital, rather than foreign direct investment. This provides an important caution on how opportunistic multinational companies may operate across different countries in Africa. Finally, the chapter suggests that falling on the opportunistic side of the capital spectrum may be incompatible with long term investment and tangible, virtuous transformation.

Having introduced Lonrho, the following section delves into Lonrho in action, starting in 1960 when the company was revived and reconstituted into a multinational company operating in Africa, notably identifying South Africa as its final growth frontier.

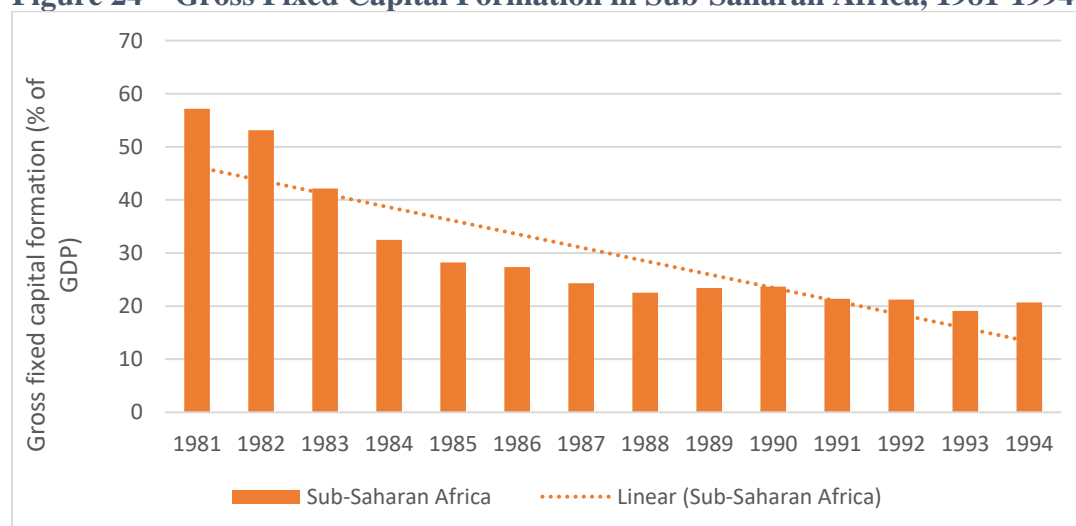
Round Zero (1960-1994) – The origins of multinational Lonrho and Tiny Rowland

7.2. The origins of multinational Lonrho and its corporate strategy during the decolonisation era in Africa

Lonrho capitalism in Africa reflects the uncertainty shared by all MNCs [Multinational Corporations] which must prevent the nationalisation impulse and other constraints threatened by host-state policies (Holloway, 1975: 225).

UK Prime Minister Harold Macmillan visited several British colonies in Africa in early 1960, culminating in a speech to the Parliament of South Africa on 3 February, where he said that “the wind of change is blowing through this continent” (Myers, 2000: 565). Soon thereafter, a wave of decolonisation spread throughout Africa.⁷⁷ The confluence of decolonisation, nationalisation, and disinvestment (see Figure 24) created a high-risk environment for international capital. Yet, during this period, Lonrho assertively acquired substantial assets across Africa, spanning mining, agriculture, vehicle distribution, newspapers, arms distribution, and more. This propelled it to becoming a significant presence on the London Stock Exchange and a major player in Africa in terms of diversity and reach (Uche, 2016).

Figure 24 – Gross Fixed Capital Formation in Sub-Saharan Africa, 1981-1994



Source: World Bank national accounts data: <https://data.worldbank.org/indicator/NE.GDI.FTOT.ZS>

Note: pre-1981 data on Sub-Saharan Africa not available from the source.

⁷⁷ Several African countries attained their independence during this period. These include Senegal (1960), Democratic Republic of Congo (1960), Burkina Faso (1960), Cote d’Ivoire (1960), Nigeria (1960), Sierra Leone (1961), Rwanda (1962), Uganda (1962), Kenya (1963), Malawi (1964), Zambia (1964), culminating in South Africa’s freedom from Apartheid in 1994.

Lonrho's expansion positioned it as a notable corporate participant in the decolonisation stories of multiple African nations. Right from the outset of decolonisation in 1960, Lonrho positioned itself as a friend of Africa, a perception that resonated with several local African leaders (Cronjé, Ling & Cronjé, 1976). It emerged as one of Africa's most scrutinised multinationals, not only due to its rapid growth during the decolonisation phase but also for its influence on the process itself. Unlike other multinational corporations, Lonrho distinguished itself by cultivating personal relationships with key African leaders (Holloway, 1975: 226). The CEO, Tiny Rowland, gained access to influential figures, being regarded as an "ambassador extraordinary" for many African countries. His rapport with heads of state bolstered his position (Mugomba, 1979: 60), as he projected himself as a proponent of "revolutionary capitalism" and a vocal critic of white racism (Mugomba, 1979: 58).

Originally a "sleepy little mining company in Rhodesia" (Spannaus, 1993: 75), for its first fifty years until 1961, Lonrho transformed remarkably. In just eleven years, its turnover reached around \$550 million, with 78 per cent originating from post-colonial Africa (Mutharika, 1975). By 1978, Lonrho was one of the largest and most widely established companies on the African continent, acquiring numerous ex-colonial companies in diverse sectors (Thachuk, 1989; Uche, 2016). By the mid-1980s, Lonrho operated across over 800 companies, spanning 80 countries, and employing 150,000 individuals (Uche, 2016). By 1990, the company had become a conglomerate with operations generating £6 billion revenue (compared to £1.7 billion revenue of Anglo) and £273 million profit. It operated 900 subsidiaries of which 80 per cent were in Africa (Anglo American, 1995; Jones, 2000).

How Lonrho grew into this remarkable multinational company will prove to be important for South Africa's own story of mining and transformation. The "how" would have implications for the manner in which corporate strategies would be entrenched as a way of playing the game. What follows is a narrative description of Lonrho's strategies in navigating the expropriation risks from the early 1960s (when Lonrho took off) to the late 1990s (when Lonrho established itself in South Africa).

7.2.1. Strategy 1. Lonrho's "Partner in Progress" approach

Rowland perceptively drew the right commercial conclusions from African nationalism. He saw that African national pride dictated a new kind of relationship with Western business. As such, Lonrho offered participation either to private local interests or to the government, signalling cooperation with the post-colonial reality unfolding on the continent. To its

advantage, “the company was not tarred with the same colonial brush as many of its competitors and was therefore treated with less suspicion by African governments” (*Africa Report*, 1974: 44). The company gained a reputation for pursuing a philosophy of African participation in the company’s interests, a reputation built upon excellent personal relations with several African leaders, notably Presidents Banda of Malawi, Kaunda of Zambia, and Kenyatta of Kenya (*Africa Report*, 1974: 44). “Rowland [had a] technique of co-opting to his board people close to power in government and, more specifically, relatives of ruling heads of state into his management” (Holloway, 1975: 224). This strategy of cultivating personal relations with African elites represented a departure from previous practices, under which foreign companies, especially mining and plantation concerns, tended to be isolated expatriate communities associated only with local people through their workforce (Holloway, 1975: 226). It is through these “deals” that Lonrho solved the problem of governmental mistrust of multinationals.⁷⁸

To safeguard investments, Lonrho employed two additional tactics. Firstly, side payments played a crucial role. These payments greased the wheels of business and secured loyalty, as the saying went, “trade follows not the flag, but the bribes” (*Africa Report*, 1974: 44). Lonrho's former chairperson, Angus Ogilvy, likened these payments to underwriting fees, asserting their necessity in certain countries (Green, 1977: 59). Special payments included contributions to political parties, which Lonrho saw as necessary payments for doing business. The objective was never to take sides, but to make money with whichever partners and in whatever political setting was conducive. Thus, several African leaders were “courted, cajoled, convinced, and even bribed to agree to circumstances or procedures that are generally institutionalised processes in many industrialised states” (*Africa Report*, 1974: 42).

Lonrho's early grasp of tailoring political-legitimizing deals to distinct and evolving political settings underscores its adaptability. This experience across diverse scenarios is encapsulated in Table 18, detailing the political regime, Lonrho's corresponding strategy, and the resultant impact on expropriation risk. This table also includes a column listing the various companies owned by Lonrho.

⁷⁸ Documenting how Lonrho operated in Africa during this time does not mean that this kind of practice was exceptional to Lonrho, or that it was exceptional to the African continent. Lonrho was only one of several foreign capitalist enterprises in Africa after 1960. Moreover, personalised politics and “crony capitalism” are pervasive across several countries in different continents.

7.2.2. Strategy 2. Opportunistic Acquisitions with "Lonrho Paper"

A pattern of acquisition of existing companies soon became Lonrho's chief style of operation with a concomitant rise of Tiny Rowland to the position of Chief Executive Officer (Holloway, 1975: 223).

The speed with which Lonrho mushroomed throughout newly independent Africa is explained by its aggressive acquisition of businesses. As soon as Rowland took the lead, he quickly changed the way the company made money. He made the business depend heavily on his personal contacts and diversified swiftly through acquisitions and various deals (Burdette, 1980). Critics characterised Lonrho's expansion as reliant on "Lonrho paper," a reference to its practice of using its own overvalued stock to acquire undervalued stock from other companies. Critics claimed this approach allowed Lonrho to secure solid assets without significant financial investment (*EIR*, 1990: 51). Furthermore, Lonrho's acquisition strategy often entailed minimal investment in enhancing management performance; some accused the company of asset-stripping or rapidly divesting underperforming entities (*Africa Report*, 1974: 42).

Researchers concurred that Lonrho's contributions to host countries' fixed capital accumulation were limited. Lonrho was labelled a "scavenger company" that grew by taking over existing assets, rather than significantly contributing to technological or management upgrades (Burdette, 1980: 104). Critics argued that Lonrho's growth was predicated on seizing opportunities, often involving companies on the brink of profitability, projects needing finance for ripe schemes, or sound companies available at bargain prices (Green, 1977: 60). This perspective suggested that Rowland excelled in financial opportunities but not in knowledge, production, or management. Lonrho's strategy was centred on "juggling sums," both legally and illegally, rather than driving substantive improvements (Green, 1977: 60).

This view, asserting that Lonrho's operations did not fundamentally alter productive relations, but rather depended on overtly political relations, aligned with various scholarly opinions. Lonrho was criticised for not injecting foreign capital into national economies, with apparent foreign capital often being local accumulated profits that expanded the company's assets without substantial net foreign exchange gains for the national economy (Shivji, 1973; Mutharika, 1975; Cronjé, Ling & Cronjé, 1976).

How did Lonrho navigate into South Africa, a nation boasting relatively strong rule of law by the time the company established a presence there (i.e., late 1970s)? Furthermore, how did Lonrho navigate shifting political landscapes and BEE pressures? Subsequent sections address these questions.

Table 18 - The corporate strategy of Lonrho and some outcomes, 1960s-70s

Ruler and Country political conditions and/or Policy Profile (1960s-70s)		Lonrho strategy	Result regarding keeping expropriation at bay for Lonrho	Some Lonrho Entities operating within country
Zimbabwe	British colony, then Mugabe/ZANU-led post 1980	Support for Nkomo's ZAPU, mistakenly believing it to be a sure government-in-waiting; upon losing, regroups in SA	Thriving, pre-independence of 1980; survives during early Mugabe era through signalling cooperation	David Whitehead Holdings (Zimbabwe's leading textile outfit); Lonrho Investment Co Ltd (vehicle and spares distribution); HENDERSON'S TRANSVAAL Estates Ltd; Willoughby's Consolidated Co (publishing)
Zambia	Kenneth Kaunda. Comprehensive Nationalisation – (c.\$421/300m). Examples: Copper (Anglo-American, Roan Selection Trust) valued at over \$600m – 51%. Most manufacturing, transport, freehold land, banks, newspapers, and hotels.	Personal deals and favours for Kaunda, hire senior/influential political and government leaders	Successful, assets broadly protected (only Lonrho-owned newspapers and cinemas nationalised)	Heinrich's Syndicate Ltd (brewery and hostels); Lonrho Zambia Ltd (newspapers, construction, and vehicle distribution); The North Charterland Exploration Company (investment holding co.)
Ghana	Nkrumah regime, and military government. Selective Nationalisation (c.\$260/410m) Examples: Large mineral enterprises: gold (Lonrho), diamonds (C.A.S.T.), bauxite (British Aluminium), and manganese (Union Carbide) (55%). Large timber operations (55%); large enterprises (e.g., sugar, fertilisers) – 55%; petroleum refining – 100%.	Direct personalised deals with government leaders at each change of government	Successful: partnership agreement with government; government ignored UN sanctions on Rhodesia; impressive outcome under unstable government	Ashanti Gold Fields Corporation Ltd (Gold Mining, a “cash cow” to support Lonrho's acquisitive strategy throughout Africa)
Malawi	Hastings Banda. Personalised autocratic/presidential patronage Minor nationalisation (c. \$30/70m) Multinational-friendly for foreign currency and Banda's power	Direct deals with Banda; inter-hiring between Lonrho and Banda's government	Successful, with government involved in Lonrho's textile and other interests.	Lonrho (Malawi) Ltd (vehicle and spares distribution); Central Africa Co Ltd (tea plantations; one of the four largest European companies operating in colonial Malawi.)
Tanzania	Julius Nyerere regime (one party state, 1965 constitution). Nationalisation (“Arusha declaration”) (c.\$690/80m). Examples: Plantations; manufacturing; large buildings; hotels; banking; insurance; petroleum distribution; wholesaling.	Participatory agreements with government and private capital	All Lonrho subsidiaries nationalised in 1978; but Lonrho kept joint ownership of a brewery with Dar es Salaam city council.	Express Transport Co Ltd (transport, coffee warehousing); Central Line Sisal Estates Ltd (sisal estate); The African Investment Trust (finance, banking); Tancot Ltd (trading and manufacturing)
Kenya	Jomo Kenyatta. Multinational-friendly for foreign currency and Kenyatta's power. Nationalisation (c. \$172/280m). Examples: Banking – 60%. Petroleum Electric power– 50%. Some farms for redistribution to Kenyans. Indigenisation: massive, e.g., sugar; rough textiles; wholesale and retail; real estate.	Partnerships with Kenyatta relatives; hiring Kenyatta relatives; cultivated ties with ruling Kenyatta family; local borrowings (no capital injection)	Established East Africa in 1967; by 1972, had approximately 50 subsidiaries in Kenya.	Motor Mart Holdings Ltd (motor trading); East African Tanning Agent (wattle growing and ranching); Consolidated Holdings Company (printing, publishing, newspapers); Express Transport Co Ltd (transport, coffee warehousing)
Congo	Mobutu Sese Seko. Personal rule, arbitrary politics. Nationalisation (c. 481/640m). Examples: Copper (Union Miniere) valued at \$700 million– 100%; diamonds (M.I.B.A.); petroleum production – 15%; plantations; petroleum; transportation; large manufacturing companies – 100%.	Acquisition of existing foreign enterprises; deals with and hiring of Mobutu associates (e.g., Mboti Litho, Mobutu's uncle)	Not so successful; nationalised assets in 1971, but mostly restored in 1976.	Cominiere SA: Trading in Europe, Congo, and public utilities in the Congo; Cometrack (electricity)
Uganda	Edward Mutesa, Idi Amin. Political instability. Nationalisation (c.\$48/19m). Examples: Small copper mine; plantations; banking, insurance; petroleum distribution; wholesale and retail trade.	Participatory agreements with government.	Mainly unsuccessful (fragile political settlement)	Watergate Steam Shipping Co Ltd (ship Owners); Burns and Blane (Uganda) Limited
Côte d'Ivoire	Personalised rule around Houphouet-Boigny Discretionary deals with highest private bidders	Partnerships with state enterprises; Close ties with Gilchrist Olympio, son of Sylvanus Olympio.	Mixed success; undermined by equally cunning intermediaries/brokers, rather than policy effects.	Societe Ivoirienne D'exportation S.A. (commodity marketing enterprise); Sodesucre (state sugar corporation)
Sudan	Colonel Jaafar Nimeiri. Military regime; personalised	Used ruler's advisor, Khalil Osman	Successful, but withdrew many projects before overthrow of Nimeiri in 1985	Sugar plantations; sole purchaser of capital and semi-capital goods from the UK for Sudanese government; textile factory

Sources: Africa Report (1974), Rood (1976), and Thachuk (1989).

Round One (1994-2008) – From Lonrho to Lonmin: Crony Deals During Apartheid and Newly Democratic South Africa

The rest of the chapter turns to Lonmin's navigation of the BEE policy in democratic South Africa. The objective remains to surface the character of Lonmin. However, in this process, there is an overlap with the deals story. The other objective is to show the link between Lonmin and its prominent BEE partner, Shanduka. However, this partner only appears at the close of the 2000s decade. Therefore, the narrative proceeds chronologically in order to bridge the connections, while Chapter 8 will borrow part of the deals story as a way to analytically study the associated investment outcomes. Repetition will be limited.

7.3. Lonrho to Lonmin to Incwala: Corporate engagement in the newly democratic South Africa

In the post-apartheid era of South Africa, Lonrho transitioned into Lonmin, maintaining a multifaceted engagement with the country's evolving political landscape.⁷⁹ Lonrho's role during apartheid was exposed after the declassification of apartheid military intelligence records in 2017, revealing the company's involvement as an intelligence intermediary for the apartheid government as early as 1975 (Vuuren, 2017). This entailed both intelligence-sharing and arms procurement for the apartheid regime, even after the UN Security Council embargo on South Africa was enacted in 1977 (Teltsch, 1977; Vuuren, 2017). Lonrho's ties with apartheid were facilitated by individuals like Dr Marquard de Villiers, a Lonrho director and member of the Afrikaner elite group, the Broederbond, who granted Rowland direct access to the government hierarchy (Trehwela, 1990).

Amidst these activities, Lonrho purchased platinum mines in South Africa, specifically Eastern and Western Platinum, elevating its status as the third-largest global platinum producer. These mines would later form the foundation of Lonmin after conglomerates underwent unbundling post-South Africa's democratic transition in 1994 (Davies, 1990; Vuuren, 2017). During this time, Lonrho's engagement extended to both the African National Congress (ANC) and its leaders. Lonrho sponsored discussions with the ANC in 1985, and maintained close relations with prominent ANC figures like Oliver Tambo (EIR, 1993). The company's ties to the ANC deepened after Nelson Mandela's release in 1990, leading to financial support, including a \$20 million contribution to relocate the ANC's offices to Johannesburg (EIR, 1993; Open Secrets, 2017).

⁷⁹ In 1998, Lonrho was split into two entities - Lonrho plc and Lonrho Africa plc. Lonrho Plc was renamed Lonmin in 1999 and became a mining-focused operation. See Lebelo (2017).

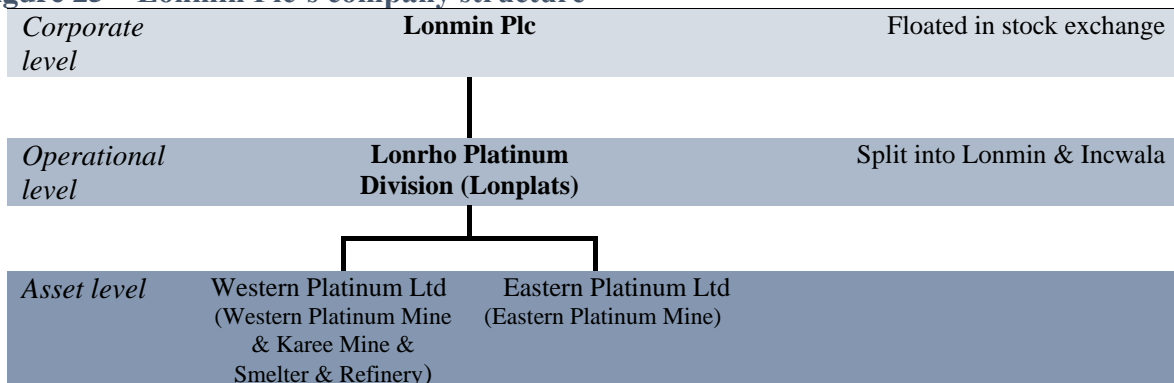
Lonrho seized an opportunity to consolidate its influence by offering to purchase and support a newspaper for the ANC, fostering the ANC's internal support. These actions earned Tiny Rowland the Star of South Africa award from the presidency in 1996 (Open Secrets, 2017). This period marked Lonrho's shift from its earlier role as an intelligence intermediary to a more comprehensive engagement with post-apartheid political elites.

7.3.1. Unbundling of Lonrho plc to create Lonmin

During South Africa's negotiation and democratic transition period from 1990 to 1994, Lonrho underwent internal changes driven by financial and geopolitical shifts. Despite its substantial turnover in 1990, Lonrho's financial stability was compromised due to political turmoil in the African states that had previously bolstered its profits (Shaoul, 1998). Some shareholders sought to remove Tiny Rowland, who held a 20 per stake in the company, due to his controversial management style (The Independent, 1994).

In 1994, a boardroom coup ousted Rowland, and Dieter Bock, a German property dealer, assumed control. Bock sold his stake to Anglo American in 1996, and the subsequent unbundling of Lonrho in May 1998 resulted in the creation of Lonmin and Lonrho Africa (Hall, 1998; Shaoul, 1998). While Lonrho Africa's value declined significantly, Lonmin emerged as a substantial platinum company with assets in South Africa (Raymond, 2005).

Figure 25 – Lonmin Plc’s company structure



Source: Author. Data from Lonmin annual report (1999)

Within this transformed structure, Lonmin was predominantly owned by Lonmin Plc, with Anglo American also having a significant stake. This restructuring facilitated a focused approach to platinum mining while retaining London as its domicile. Despite these changes, Lonmin's core assets remained in South Africa, subjecting it to the country's BEE policy.

The subsequent sections of the narrative delve into how Lonmin navigated the challenges faced by the mining industry during this time, drawing inspiration from Rowland's corporate strategies.

7.3.2. A creative strategy to the BEE rules

“Incwala, praised as a broad-based national flagship for empowerment in the mining industry” – Engineering News, 2005 (Madlala, 2005)

In the first decade post-unbundling, Lonmin managed to establish friendly relations with the ANC leadership, notably during Thabo Mbeki's presidency. The relationship developed with Oliver Tambo, a mentor to Mbeki (Gumede, 2007), laid the groundwork for Lonmin's acceptable image within the ANC.⁸⁰ This rapport with ANC leaders would continue into the next phase of Lonmin's BEE history, which will be covered in Round Two. As a result of this positive history, Lonmin avoided proactive engagement in BEE deals prior to the official legislation in 2004, contrasting with peers like Anglo and Gencor.

In 2003, just ahead of the deadline for disclosing BEE plans, Lonmin embarked on a creative strategy to navigate BEE requirements. Lonmin's leadership, including Chairperson Sir John Craven, CEO Brian Gilbertson, and Finance Director Arne Frandsen, conceived the concept of creating a black company within Lonmin, named Incwala (Mabanga, 2004). Incwala was designed as a BEE shell-vehicle that would be filled with politically connected or politically acceptable partners.

To implement this strategy, Lonmin underwent a series of actions:

- 1. Shifting Ownership:** Impala Platinum, a Lonplats (see Figure 25) shareholder, sold its 27 per cent stake back to Lonmin for \$800 million. Lonmin then ring-fenced 18 per cent of this stake to create Incwala. This move was aimed at meeting BEE ownership requirements, with Lonmin maintaining full control over Lonplats' assets.
- 2. Creating Incwala:** Lonmin crafted Incwala as a consortium of BEE partners, aiming to project a broad-based and non-politically connected image. Lonmin sought partners who matched its strategy and public message, notably focusing on lesser-known black investment groups rather than ANC-linked individuals (Innocenti, 2004).
- 3. Partner Selection:** Lonmin put together a diverse group of partners, including the Dema Group, Andisa Capital (Thelo Investments), Vantage Capital, and Bapo-ba-

⁸⁰ This does not mean that Thabo Mbeki had a relationship with Lonrho, only that Rowland had positioned the company well enough from any proactive governmental hostility.

Mogale. These partners were a combination of black financial boutiques led by ANC-connected leaders and emerging black businesswomen (Bream & Reed, 2004). (More detail on the backgrounds and connections of these partners is provided in the Appendix to Chapter 7).

4. **Public Image:** Incwala was promoted as a consortium led by black women and perceived as non-politically connected. Lonmin's portrayal of Incwala emphasised its transformative nature and community involvement (*Financial Times*, 2007; Kgosana, 2009; Makinana, Molele & Letsoala, 2012).

Lonmin secured the Department of Mineral and Energy's endorsement and Industrial Development Corporation (IDC) funding for Incwala's formation by May 2004 (Impala Platinum, 2004). The launch of Incwala was supported by the Minister of Minerals and Energy, Phumzile Mlambo-Ngcuka, and Lonmin's old order rights were quickly converted into new order mineral rights, making it the first platinum company to secure mineral rights tenure under the new rules (Impala Platinum, 2004; Wu & Moodley, 2009).

Table 19 – Incwala shareholding, 2004

Entity	Percentage holding in Incwala	Effective share of Lonplats (%)*
Dema Incwala	16.67	3
Andisa (Thelo Incwala)	16.67	3
Vantage capital	16.67	3
Bapo-ba-Mogale (<i>and Lonplats employees, and South African Women in Mining Investment Holdings</i>)	2.8	0.5 (hence NUM's general secretary protested against the deal, calling it a "fake BEE deal". See Fin24 (2004a))
Sub-total	52.8	9.5
Industrial Development Corp. (IDC)	23.6	4.25
Lonmin	23.6	4.25
Total	100	18
Total Beneficiaries	"50,000 black shareholders" (Mathews, 2005)	

Source: Author's calculations. Data from Madlala (2005); *MiningWeekly* (2004); Mabanga (2004); IOL (2006a).* Incwala share equivalent to 0.18 Lonmin share

Despite the external portrayal of Incwala as a transformative BEE entity, there were two crucial features of the deal:

1. **Ownership Structure:** The effective ownership of Lonplats by Incwala partners was relatively small, making it difficult to establish independent black enterprises. The top partners owned just 3 per cent each, while the community shareholders held 0.5 per cent.

- 2. Control and Management:** Incwala's board closely mirrored Lonmin's board, with Lonmin executives and leadership maintaining a strong influence over Incwala's activities. Zanele Mavuso Mbatha and Dawn Marole were often positioned as the face of Incwala, but control remained with Lonmin (Engineering News, 2005a; Klein, 2015a).

By 2005, Incwala was valued at R5-R6 billion, reflecting exponential growth driven by the platinum price boom and secure mining rights (Madlala, 2005; Shelley, 2006). However, this peak was short-lived, as subsequent events would lead to Incwala's decline, marking the closing narrative of Round One of Lonmin's BEE strategy.

7.3.3. The peak of isomorphism, and collapse of Incwala scheme

In 2007 Lonmin received special coverage in *The Economist*. Incwala was touted as the future flagship of black mining in South Africa with platinum assets worth \$1.7 billion. So impressive in appearance was the Incwala scheme, the World Bank IFC had awarded Lonmin a development grant of \$150 million – its largest investment to date in Sub-Saharan Africa, citing Lonmin's success as a transformed community-uplifting company (Creamer, 2007a; IFC, 2007). Notwithstanding, *The Economist* also noted that “[m]ore than two years and three chief executives later, however, little has happened... Incwala's market value has climbed from \$650m at its birth to \$1.7 billion today. Yet it remains a start-up, albeit one with a fat balance sheet” (2007). Nothing indeed happened, including plans to acquire mines and operate them, list on the JSE, and become the next Xstrata (Bream & Reed, 2004). Instead, what did happen is that the healthy financials in 2004 turned into large debt that required refinancing (*Mail & Guardian*, 2012).⁸¹ The debt situation was exacerbated by the global financial crisis. The year 2009 saw the first collapse of Incwala.⁸² Lonmin also saw a partial takeover by global commodity trading company, Xstrata.

At its height in 2007, Lonmin was worth £6.5bn (Bream, 2009), an attractive proposition for Xstrata, which had until that time interests in coal in South Africa, and was looking to penetrate platinum mining. To that effect, in August 2008 Xstrata announced a takeover bid of Lonmin (Reuters, 2008). However, by October, the price of platinum had fallen significantly, as had

⁸¹ During this period, Incwala had announced that there was a pending deal between itself and Mvelaphanda to explore a Mvela acquisition of Incwala. However Mvelaphanda (discussed in Chapter 6) issued a statement to the JSE that it was not interested nor in discussions with Incwala, contrary to market expectations (IOL, 2009).

⁸² Lonmin warned that it might be called upon to pay out R990 million in loan guarantees for Incwala shareholders, due to mature in September 2009.

the share price of Lonmin (Kollewe, 2008). Xstrata abandoned its plans for a 100 per cent takeover, instead taking a controlling stake of 24.9 per cent.⁸³ This moment changed Lonmin in three fundamental ways. First, Lonmin was in the control of a company with a documented reputation of predatory tactics, as will be discussed below. Second, the institutional investors that had been the main shareholders (at corporate level) exited the company, giving way to aggressive buying by speculative hedge funds (Bream, 2009). Third, Xstrata would bring into Incwala its BEE partner, Cyril Ramaphosa, who also had a comfortable history with Rowland, and enjoyed great influence in the ANC and the private sector in South Africa. Ramaphosa moved into the Incwala stake, beginning Lonmin's Round Two of the BEE game.

Round Two (2009-2012) – Finding a suitable partner in Cyril Ramaphosa's Shanduka

The Round Two narrative documents Lonmin's strategy of manoeuvring the rules-deals environment. The narrative begins with a broad outline of the new Incwala deal, and thereafter provides empirical background on the history and emergence of Cyril Ramaphosa as a prominent BEE partner in the BEE deals market. This round ends abruptly with the tragic massacre in 2012 of 34 mine workers at Lonmin's mine in Marikana, North West. This event will usher in a closing Round Three to the chapter.

7.4. Cyril Ramaphosa as a BEE champion in mining, and beyond

In early 2010, Cyril Ramaphosa's company, Shanduka Resources, was announced as the new partner taking over the 50.03 per cent of Incwala stake formerly held by the first group of partners, in a R2.8 billion deal (Pickings, 2010).⁸⁴ The *Mail and Guardian* noted that Ramaphosa, who would also become a non-executive director in Lonmin, was politically and publicly palatable: "... politically he has remained ANC without being too closely identified with the Zuma faction, despite being named as a conspirator against Thabo Mbeki" (2010). To effect the transaction, Lonmin extended a loan of R2.5 billion to Shanduka, while Shanduka only paid R300 million for the stake. Lonmin was quoted as saying that "the security of the stake is Incwala itself" (*Mail & Guardian*, 2010). This was true, because Incwala remained by design Lonmin's company. The loan would be paid back within five years, with Lonmin asserting that it had constructed a bullet-proof deal, calling it a long-term partnership. By

⁸³ In other words, Xstrata was the single largest shareholder.

⁸⁴ The "0.03" per cent is crucial to be added because it meant Ramaphosa could be presented as the majority owner of Incwala.

placing Ramaphosa on the Lonmin board, the I-firm said it was placing its BEE partner close to operations (Creamer, 2010).

Who is Cyril Ramaphosa, and how did he become Lonmin's partner of choice? The following traces the rise of Ramaphosa to surface the ways in which he might have been a good fit for Lonmin.

7.4.1. The emergence of Cyril Ramaphosa as a unionist, politician, and businessman

Ramaphosa had been identified and groomed by mining magnates Anglovaal and Anglo American since the 1970s. With a rise in mining labour resistance and riots in the 1970-80s in South Africa, the Oppenheimers and Clive Menell of Anglovaal (the company eventually taken over by Patrice Motsepe) set up the Urban Foundation in 1977, an organisation meant to provide corporate social assistance to communities in order to curb resistance. They installed Ramaphosa as a leader of the foundation. Menell had met Ramaphosa in earlier years while Ramaphosa was in trouble with the apartheid state for his participation in anti-apartheid activism. Being impressed with Ramaphosa, Menell developed a friendly relationship with him. Soon after, Ramaphosa was in the company of the Oppenheimers, who were equally impressed, more so in light of their interests in co-opting promising useful black leaders into their sphere of influence (Butler, 2019).

Shortly after, in 1982, Ramaphosa became a founding member of the National Union of Mineworkers (NUM), becoming a secretary general – *de facto* head of the union. As related in Chapter 5, the 1980s were a period of labour upheavals in the mining industry. Ramaphosa's rise to lead the unionisation of these labour concerns placed him at the forefront of political leadership at that time, especially as a tough negotiator with mining companies on labour matters. In 1983, the Oppenheimer-controlled Chamber of Mines cooperated with the changing labour landscape led by Ramaphosa by granting bargaining recognition to the National Union of Mineworkers. Upon the unbanning of the African National Congress (ANC) by the apartheid government in 1990, Ramaphosa became the new ANC Secretary General (Parker & Mhlanga, 2017). However, in a race to become deputy president to Nelson Mandela, Ramaphosa lost to Thabo Mbeki, a moment that saw Ramaphosa temporarily leaving politics for the private sector (Butler, 2019).

Recalling the story of Anglo in Chapter 5, the mid-1990s was the moment when Anglo was unbundling the original JCI company (or Johnnies) into platinum (Amplats), gold (JCI) and

non-mining industrial holding company (Johnnic). While the JCI deal with Mzi Khumalo was Anglo's first BEE deal *in mining*, its first empowerment deal was the transfer of Johnnic to a consortium led by Ramaphosa (McNeil, 1996). Johnnic was a diversified holding company giving the Ramaphosa consortium control over several entities including publishing, insurance, telecommunications, and property. Controlling stake was transferred to the consortium for R2,7 billion, 11 per cent below market price (McNeil, 1996; van Rensburg, 2017).⁸⁵ The consortium was called the National Empowerment Consortium (NEC), which comprised mostly of individuals from Cosatu unions, and included New Africa Investments Limited (NAIL) (News24, 2015). NAIL was a flagship BEE company of prominent ANC-aligned black business people who were the first to benefit from a private sector-led BEE deal in the form of an empowerment transaction with Afrikaner capital, Sanlam (See more in Levy, et al., 2021). That the NEC consisted of black organised business and unionists gave the deal credibility, and gave Ramaphosa credibility as a leader capable of leading in the private sector (Wackernagel & Golding-Duffy, 1996; News24, 2015). By 1997/8, Johnnic had a total market capitalisation of R8.5 billion, with Ramaphosa as non-executive chairman, responsible for strategic direction and management of the board (McNeil, 1996). He became, as *The Economist* noted, “the new Rand Lord” (1997).

In February 1999, Ramaphosa stepped down from NAIL, taking up several director positions in companies including Anglo American, South African Breweries, Times Media Limited, Molope Group, and First National Bank. In parallel, however, Ramaphosa continued chairing Johnnic (majority owned by NAIL), but the entity struggled to find direction under Ramaphosa. The company slowly crumbled through continuous sales of its assets to “unlock value”, eventually collapsing when the JSE pressured Johnnic to collapse the pyramid structure (News24, 2006). This progressive crumbling of Johnnic is cited as the first reason for Ramaphosa's gradual departure by taking up the aforementioned opportunities. The second speculative reason, according to Butler (2019), is that Ramaphosa had been forced out by board members purportedly aligned with Thabo Mbeki.⁸⁶ To this effect, Thabo Mbeki's office publicly issued a denial:

⁸⁵ This is how the deal was funded. After resigning from the ANC post, Ramaphosa took up a position as Deputy Executive Chairman of New Africa Investments Limited (NAIL), a leading, black-led consortium (explained in the paragraph). NAIL invested approximately R7 million to start up an investment banking company called Pleiade Investment Corporation, which was later named AMB Capital. AMB then acted as advisor to the transaction, raising R2.1 billion mainly from labour union pension funds (News24, 2015).

⁸⁶ In particular, Dikgang Moseneke and Zwelakhe Sisulu.

The Deputy President has no personal or financial interest in the affairs of any private company, including NAIL, to determine the future of its directors – nor does the Deputy President have any interest in the personal fortunes of Mr Cyril Ramaphosa... The decision by Mr Ramaphosa to quit his post is an internal matter between NAIL directors and Mr Ramaphosa and they have nothing to do with the Deputy President” (Butler, 2019: 384).

Analytically, this moment highlights the dynamics of the relationship between empowerment deals and ANC factions, which were becoming increasingly visible during the Mbeki era. Butler observes that “many business people believe there is a broad correlation between internal ANC power and access to commercial opportunities... after 2007 Cyril increasingly had ‘weight’ in the organisation... His fight with Mbeki credentialised him in the view of the Polokwane [2007 ANC conference] crowd” (Butler, 2019: 445). This reading of Ramaphosa’s political position in relation to a post-Mbeki moment may have played a role in the entry of Ramaphosa in Lonmin in 2009. But before that apex narrative, a bridging narrative of how Ramaphosa formed his own company, Shanduka, firmly establishing him as one of the leading BEE empowerment companies, is necessary.

7.4.2. The formation of Shanduka Resources and its corporate strategy

The Asian financial crisis precipitated a stock market crash on the JSE, which wiped out several BEE deals. This led to the formation of the Black Economic Empowerment Commission (BEECom), to formalise and expand the BEE project, starting with the mining sector (Nxele, 2022). BEECom was led by Cyril Ramaphosa, and its work culminated in the formation of the new mining legislation and the BEE legislation (Nxele, 2022). This development supported two of Ramaphosa’s wishes. The first wish was to establish his own BEE company that could capitalise on the growing opportunities in the BEE market. The second wish was to enter the mining sector, believing it was a lucrative industry (Butler, 2019).⁸⁷

To materialise his wishes, in 2001 Ramaphosa set up the business through which he could benefit from the pipeline of BEE deals. He began trading as Shanduka. Shanduka soon built up a diverse portfolio of listed and unlisted assets, becoming essentially a financial investor

⁸⁷ Ramaphosa initially sought entry into mining through Anglo’s JCI. He had ambitions to run a mining house. Thus, it was with JCI in mind, rather than Johnnic, that he prepared himself when Anglo was unbundling. However, Anglo had determined to sell Johnnic first, and this created a dilemma for Ramaphosa, who eventually decided not to miss the Johnnic opportunity, yet hoped to be front-runner in the JCI deal. This never came to be (Butler, 2019).

(Masie, 2014). Shanduka's growth strategy was to engage in several deals, taking advantage of the empowerment discounts of these equity stakes. This strategy worked well for Ramaphosa, who built a conglomerate-like company with several companies under Shanduka. However, observers saw Shanduka's deals as seeking benefits without adding value (Masie, 2014; Butler, 2019). There was no evidence that Shanduka took on active operations, save for inheriting already established processes such as MacDonaldis South Africa and Coca Cola South Africa packaging. Despite his substantial wealth, those who studied his business dealings in the 2000s believed that he was not a natural or enthusiastic businessman (Butler, 2019). Notwithstanding, Ramaphosa was more concerned with converting Shanduka into a mining focused investment company, an opportunity that continued to elude him until the mid-2000s, when he would partner with Glencore and Xstrata.

To enter mining, Ramaphosa focused on coal by registering Shanduka Coal. This was in preparation for a partnership with Swiss-based commodity trader, Glencore. Glencore was building a portfolio of coal assets in South Africa and had worked with Xstrata at least since 2002 on local coal deals (Aversano & Ritsatos, 2015). Glencore entered coal by purchasing Lonmin's coal assets in 2000. At that time, Glencore also began buying Xstrata, with the two companies cross-shareholding in South African coal assets (PriceWaterhouseCoopers, 2009). With the BEE requirements in play, Glencore picked Ramaphosa's Shanduka as its BEE partner.

The Glencore-Shanduka partnership became effective in 2005. Shortly thereafter, the pair teamed up as investors in a controversial deal called the Optimum project to supply coal to the state power authority, Eskom. That deal did not end well when the government blocked permits for the mine, forcing Glencore to sell the mine to the state capture associated Gupta family, who were business allies of President Jacob Zuma (Orderson, 2019).⁸⁸ According to Butler (2019), sceptics saw Shanduka Coal as merely a "front" for Glencore, because the international trading company lacked an appealing corporate profile.⁸⁹ Commodity trading company Xstrata,

⁸⁸ This empirical detail requires some background on state capture in South Africa during the presidential terms of President Jacob Zuma (2009-2018). A source that can be consulted is Chipkin et al., (2018).

⁸⁹ Glencore's origins lay in the dealings of an oil and metals trader, Marc Rich, who was notorious for his role in apartheid-era sanctions-busting (Butler, 2019). Similar to Lonrho, Glencore is known for its ability to work in resource-rich countries that often do not enjoy stable government or the reliable application of the rule of law. Their profits often involve corruption. For example, in 2014, corruption investigator, *Global Witness*, issued a damning report on Glencore's corrupt dealings with Congolese President Joseph Kabila relations to the DRC's Katanga mine (Doherty, Blum & Zihlmann, 2017). In 2019, Glencore was the subject of an investigation by the US Department of Justice into its trading activities since 2007 in several places such as Nigeria, Venezuela, and the DRC, linked to the Paradise papers (McKay, 2019). It was found guilty in 2022 (Howard, 2022).

which was swallowed up by Glencore in 2014, has been painted with a similar brush (Fletcher, 2012). By 2008, Xstrata owned 24.5 per cent of Lonmin, cementing cross-shareholdings between Lonmin, Ramaphosa, and Glencore-Xstrata (Fletcher, 2012).

Overall, during the 2000s Ramaphosa benefitted tremendously from the developments of BEE. By the late-2000s, Ramaphosa sat on nearly 20 boards including Alexander Forbes, SABMiller, MTN, and Bidvest. As an E-firm, he was a potent partner who brought legitimacy to I-firms. However, operationally, the Shanduka model was driven by deal originators, mostly with investment banking backgrounds, who sought deals that could exploit empowerment discounts on share prices (Butler, 2019). Most of these broad-based deals were set up as preferential shares varying between three to eight per cent discount to listed share price values, and this allowed Ramaphosa to generate his substantial wealth (2016). This model of wealth accumulation, however, hardly led to the creation of a thriving, productive enterprise. Notwithstanding, the 2009/10 period culminated in an opportunity to convert Shanduka into a black platinum firm in Lonmin. How did such a model of wealth accumulation – a version of BEE-based accumulation – square with the opportunistic disposition of Lonmin? The following section tells the story as a final part of the chapter’s narrative.

7.4.3. Ramaphosa’s brief partnership with Lonmin

The collapse of the Incwala scheme and controlling share of Xstrata in Lonmin facilitated the entry of Ramaphosa as the new BEE partner in Lonmin. Already mentioned, Ramaphosa’s entry was timely, making him well positioned in the new anti-Mbeki ANC factional shift. Moreover, Ramaphosa was deeply connected to the government, and to the National Union of Mineworkers, and enjoyed intimate knowledge of the dynamics of labour relations (Butler, 2019). The deal was generous: Ramaphosa only had to put up 0.012 per cent cash, with the rest given as a loan by Lonmin and Xstrata to be repaid by Lonmin generated profits.⁹⁰ Ramaphosa need only take on a non-executive directorship position, and chair Lonmin’s transformation committee (Lonmin, 2010), without the baggage of joint-venture production expectations. This kind of deal was consistent with the Shanduka model. What would prove especially important to Lonmin during Ramaphosa’s tenure is that as chair of the company’s transformation committee, he was responsible for monitoring social development plans and mineworkers’

⁹⁰ Lonmin raised the funds through a share issue to which Xstrata was the major subscriber. As a further sweetener, Shanduka was contracted to provide training and welfare services to Lonmin in a multi-million-dollar deal (Butler, 2019).

welfare. As a director, he could be called upon to facilitate the solution of major political and labour problems, where the cooperation and intervention of government or labour unions were required (Butler, 2019).

Through Incwala, Ramaphosa was securing “quite a high-quality asset”, and this appears to have been a driving consideration. However, Butler (2019) reflects that Ramaphosa must have considered the wider political implications of a partnership with a company of Lonrho’s reputation, for “...Ramaphosa must have known that he was buying into a volatile and politically exposed business” (Butler, 2019: 451). The entity was known for its long history of exploitation and political manipulation on the continent, and famous deal-making in resource-rich dictatorships through its director, Tiny Rowland. In addition, both Glencore and Xstrata had similar, widely publicised reputations. Ramaphosa was acquiring considerable historical and contemporary geopolitical liabilities, and not merely a share of the company’s dividends (Butler, 2019). Nevertheless, he was seemingly comfortable with such partners.

By 2012, Ramaphosa had moved decisively back into politics. The 2012 Marikana massacre complicated but did not derail that move.⁹¹ He disposed of Shanduka as part of his ascendancy to the ANC presidency. The deal-level dynamics with Lonmin, especially in relation to investment, will be covered in the next chapter. As the final section of this chapter will show, his track record since the early 2000s provides ample material to place his business approach on the patient-predatory spectrum.

7.5. Conclusion: Characterising Lonmin and Shanduka along the capital spectrum

The chapter concludes by evaluating how Lonmin and Shanduka (Ramaphosa's company) fit within the patient-predatory spectrum in terms of their behaviour and attributes. This positioning is important to understand their strategies and approaches, shedding light on whether they prioritise patient capital investment, production, and transformative growth. The comparison aims to provide insight into their roles in the South African mining industry and broader economic development.

⁹¹ The Marikana massacre of 16 August 2012 happened in Lonmin’s Marikana mine, where 34 mine workers were shot dead by the South African Police Service (Alexander, 2013). Cyril Ramaphosa, newly installed Deputy President of the ANC and South Africa, and still acting as Lonmin’s BEE partner, was implicated negatively through his direct involvement in the decisions taken to deal with the striking workers (Butler 2019).

7.5.1. Lonmin's Position on the Capital Spectrum

Studying Lonrho's (Lonmin's) corporate strategy reveals its approach to thriving through political changes in Africa. The company's strategy seemed to rely on manipulating or managing rules via disadvantageous deals. This strategic approach was extended to South Africa's BEE policy, with the creation of Incwala as a shell that was not designed to become a productive mining company on its own. Lonmin's emphasis on passive minority shareholders was consistent with its parent company's approach, characterised by front-loaded deals that enriched a few individuals but did not contribute to the emergence of operating mining companies. This opportunistic strategy earned Lonmin a score of 9 out of 24 on the capital spectrum, placing it on the opportunistic end.

Table 20 - INSTRUMENT 1: Lonmin and Shanduka score on the capital spectrum

Attributes	Company types				Lonmin (5)	Shanduka (6)
	Patient/Producer company (farsighted)* (1)	Investment- holding company (2)	Opportunistic (3)	Predatory (4)		
<i>Incentives or behaviour</i>						
Focus is on fixed investment, production, and skills	+++	++	+	0	2	1
Patient capital invests in exploration and mine development	+++	++	+	0	1	0
Patient capital creates a pipeline of fixed investment projects	+++	++	+	0	0	1
Patient capital seeks for patient JV partners	+++	++	+	0	1	1
Patient capital seeks long-term production-based deals with partners	+++	++	+	0	0	1
Patient capital deploys its own balance sheet capital to domestic investment	+++	++	+	0	1	1
Patient capital, or its corporate strategy, sits above political factions	+++	++	+	0	1	1
Majority of revenue comes from sales of produced goods and services	+++	++	+	0	3	1
Maximum score	24	16	8	0	9	7

7.5.2. Ramaphosa's Shanduka on the Capital Spectrum

Ramaphosa's dealings under Shanduka exemplify the BEE model that often focused on equity transfers without driving transformative industrial growth. His reputation as a politician rather than a businessman is underscored by accounts from colleagues and associates. While

Ramaphosa managed to strike deals with personal charm and insight, he was positioned as a middle-spectrum entrepreneur in the global business landscape. Shanduka earned a score of 7 out of 24 on the capital spectrum, positioning it similarly on the opportunistic side.

The exploration of Lonmin and Shanduka's positioning on the capital spectrum contributes to understanding the behaviour and attributes of these entities within the South African economic context.

CHAPTER 8 Lonmin: Tracing two-level deals, subsequent investments, and transformation

8.1. Introduction

Similar to Amplats, Lonmin confronted the challenge of safeguarding against predation. How did Lonmin counter expropriation risk, and to what extent did its strategy support sustained investment in platinum? The argument is that deal effectiveness varies, linked to the nature of the involved I-firm, its strategy, and engaged E-firms.

This chapter examines I-firm opportunistic capital through Lonmin's BEE deals and platinum partners. Lonmin epitomises an opportunistic incumbent pursuing maximum opportunism over sustained investments. In the story of building racially transforming, investment-led growth, Lonmin might represent a failure of national development policy – a failure to invest in and develop new mines.

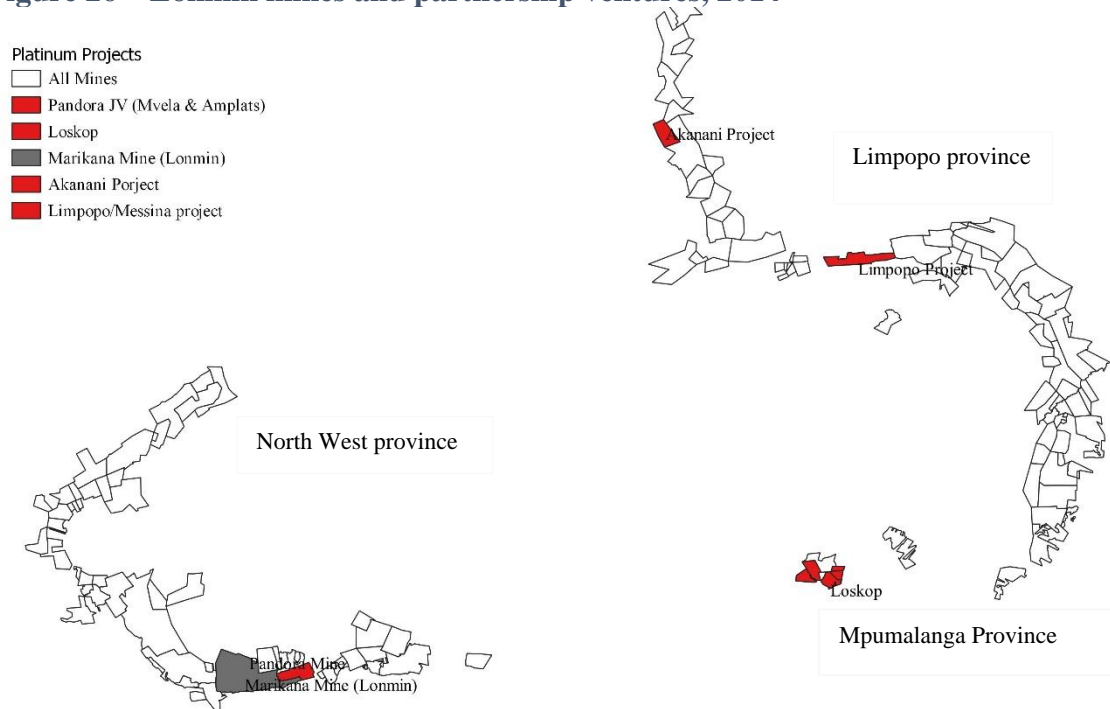
The chapter comprises two sections: the corporate-level deal and asset-level deal. The former probes Lonmin's political and governmental engagement, assessing its content and investment impact. This section interprets Lonmin's political involvement (covered in Chapter 7) as corporate-political agreements. It then gauges the deal's investment support.

To validate the hypothesis of good deals as robust corporate-political and asset-level partnerships, research must broadly investigate Lonmin's partner selection and Incwala's extended trajectory. This reveals the preferred partners for Lonmin, encompassing unsuccessful deals. The extensive inquiry yielded two corporate-political deals - the Rowland-ANC deal of the early 1990s and the Incwala deal addressing Lonmin-wide expropriation risk. Additionally, four asset-level deals were uncovered: Akanani project, Pandora project, Messina/Limpopo mine deal, and Loskop project. These projects/deals will be further scrutinised in subsequent sections.

8.1. Lonmin Mines

Lonmin assets included Western and Eastern Platinum, managing three mining units, a smelter complex, base metal refinery, and precious metal refinery - collectively termed "Marikana operations."⁹² These constituted 95 per cent of Lonmin's production in 2006 (Lonmin, 2006a).⁹³

Figure 26 – Lonmin mines and partnership ventures, 2014



Source: Author, using QGIS software. Data from (Zientek et al., 2014).

Figure 26 illustrates Lonmin's mines and partnership ventures in 2014. Marikana complex is depicted in grey, while partnership ventures are marked in red. Marikana mine underpins Lonmin's presence, while unexplored leased mineral areas represent missed investment opportunities. This chapter contends that these oversights stem from Lonmin's I-firm nature and to some extent, its BEE partners.

8.2. Theoretical expectations: Lonmin as impatient and outcomes

The chapter is grounded on the part finding from Chapter 7 that Lonmin was a predatory I-firm. This chapter postulates that predatory-oriented corporate-political deals generate unstable outcomes, resulting in low investment and inadequate transformation. In terms of firm/asset

⁹² Located in the Marikana village in Brits in the North West province. This is the location of the Marikana massacre of 2012.

⁹³ Annual production of 1.2 million ounces of platinum group metals is extracted from the Marikana mining lease area which covers a strike length of some 27 kilometres of the Merensky and UG2 reefs.

level deals, the micro-level typology (Typology B) from Chapter 7 yields potential outcomes based on opportunistic I-firms' BEE partnerships. Figure 27 reproduces Typology B .

Figure 27 – TYPOLOGY B: Theoretical investment outcomes in I-predatory world

		Theoretical investment outcomes in I-predatory world	
		Type of BEE Partner	
		E-patient partner	E-opportunistic partner
Type of deal	Production deal	Empirically unlikely (I-Impatient company)	Low (subsequent) Investment
	Passive equity deal	Moderate (subsequent) investment	Low (subsequent) investment or deal collapse

Source: Author

Given Lonmin's predatory disposition, it is anticipated that Lonmin will generally make modest subsequent investments across its asset level deals. This may stem from subpar deals with opportunistic partners due to: (i) Lonmin's inability to stabilise BEE partners, (ii) limited understanding of the deal landscape, or (iii) partnering with entities lacking credible commitment delivery.

8.3. The Corporate-political deal

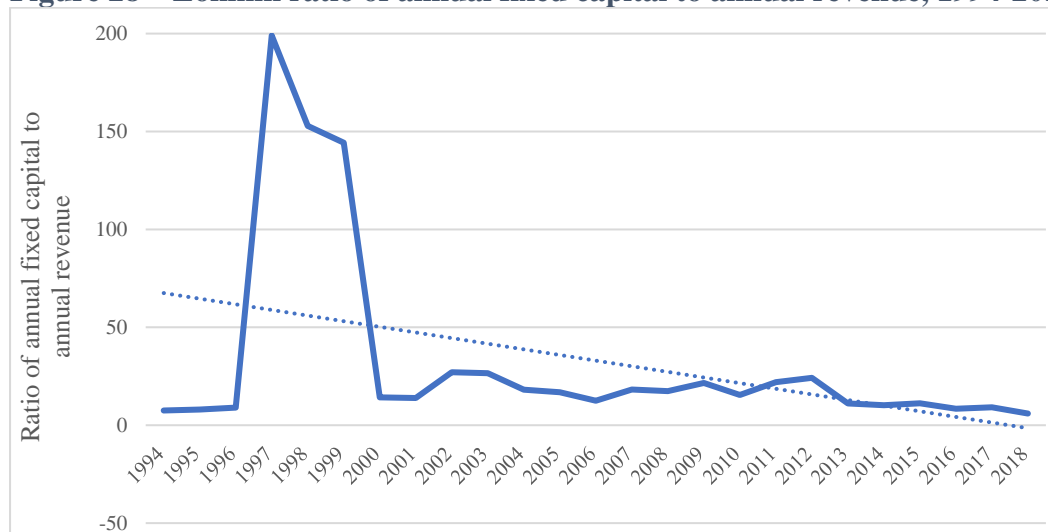
Continuing from Chapter 7, this section examines, describes and tracks Lonmin's corporate level deal, and evaluates its investment and transformation achievements. How did Lonmin achieve its legitimacy in democratic South Africa and how did it protect its main mines – the Marikana complex? The answer is that the early relationship with Rowland was important in tying Lonmin to the early 1990s ANC. Thereafter, the Incwala “fronting” deal was the main legitimising tactic. Therefore, the Incwala creation is viewed as a corporate-political level deal. The two deals are revisited below to evaluate their role in Lonmin's capital investment performance.

1990-2013: The Rowland Deal and Incwala

Chapter 7 highlighted Rowland's collaboration with the ANC's exile leadership from 1990 to 1998, marked by Lonrho's funding for the ANC's office relocation to Johannesburg and backing for a pro-ANC newspaper ahead of elections. In 1987, Lonrho initiated Marikana mining complex development, followed by plans in 1993 to expand its mining complex, solidifying Lonmin as South Africa's third-largest platinum producer (EIR, 1993; Karl Maier, 1993).

While Lonmin showcased significant initial capital investment relative to revenue, subsequent investment remained stagnant, posing questions about sustained growth (see Figure 28).

Figure 28 – Lonmin ratio of annual fixed capital to annual revenue, 1994-2018



Source: Author. Data from Lonmin annual reports.

In 1998, BEE dynamics shifted as other mining companies embraced BEE partnerships to secure mineral rights. Lonmin's reliance on the Rowland relationship shifted by late 2003. By then, Lonmin divided itself into Lonmin (the I-firm) and Incwala (the supposed BEE partner), co-opting Mbeki-aligned BEE beneficiaries to conform with legal requirements (see Chapter 7). Lonmin replicated this with Shanduka, replacing the initial Incwala partners. This BEE strategy maintained ties with the state, though the relationship strained in 2012 when Ramaphosa distanced himself.

2014-onward. Challenges and collapse

By 2014, Lonmin faced existential threats: rebuilding BEE credentials, securing funds for growth, and restoring its image. To address BEE concerns, Lonmin collaborated with the Bapo-Ba-Mogale mining communities in 2014, facing legal challenges due to lack of transparency and community engagement (Klein, 2015).⁹⁴ Lonmin sought a \$400 million bailout from shareholders in 2015, but its asset value declined significantly (Klein, 2015c; Van Vuuren, 2015; McKay, 2016). Despite attempts at recovery and investment, Lonmin struggled, leading

⁹⁴ The Mogale community had rejected the Ramaphosa deal of 2010, arguing that the community should be offered the Incwala stake, given their pre-emptive rights to buy out distressed shareholders. “But Hugh Eiser, legal representative for the Bapo ba Mogale, said this right was ignored by Lonmin, which favoured the politically connected Shanduka Resources” (*Mail & Guardian*, 2012). In response to why Lonmin had not offered the loan to the Mogale community, Lonmin said it needed a partner that could add value.

to its acquisition by Sibanye Stillwater in 2019, including Incwala (Zama, 2019). Attempts at revitalisation through asset purchases failed to rescue Lonmin.⁹⁵

Conclusion on the corporal-political deal

To assess this corporate-level deal, Instrument 2 developed in Chapter 2 is utilised. Lonmin scores 2 out of 9 on the transformative deal schema and -6 out of -9 on the collusive deal schema, resulting in a total score of -4. Lonmin's corporate-level deal leaned towards the predatory side, focused on political party relationships and isomorphism, with minimal investment and limited transformation outcomes. While the corporate deal did not significantly bolster sustained investment or fruitful BEE partnerships, it rather maintained minimum investment levels and focused on asset management.

Figure 29 – INSTRUMENT 2: The corporate-political deal spectrum (Lonmin)

	Transformative deal	Score range (0-3)	Collusive deal	Score range (-3-0)	No deal	Full score	Lonmin score
i	Unlocking/unbundling assets for resourcing BEE	0	Closed party-funding focused deals	-2	No deal	0	-2
ii	Commitment to continuing investment	1	Rent-sharing arrangements, no commitment to investment	-2	No deal	0	-1
iii	Commitment to racially transforming company	1	Isomorphism tactics rather than transformation	-2	No deal	0	-1
	Total score	2		-6		0	-4

Source: Author

This outcome remains consistent across various analyses, even when considering operating profit or year-on-year changes in capital investment. Annual reports also support this trend, emphasising replacement expenditure over expansion plans. Hence, the corporate-level deal did not effectively drive sustained investment or productive BEE partnerships. Section 8.4 explores Lonmin's asset-level deals to uncover potential variation in relation to key variables.

8.4. Summary of Asset level deals and investment outcomes

This subsection presents Lonmin's asset-level deals by summarising findings and categorising investments into tiers using Instrument 3 (the firm/asset level deal success spectrum) developed in Chapter 2.

⁹⁵ Ramaphosa subsequently sold Shanduka to the Phembani Group, a company led by Phuthuma Nhleko, former CEO of telecoms company, MTN (Fin24, 2014). Stillwater kept Phembani and the PIC as BEE partners (McKay, 2021).

Table 21 – Summary of Lonmin’s asset level deals and investment outcomes

Year of deal	Asset	Black Partner	Details of plans	Outcome in 2018
2000	Pandora	Mvelaphanda Bapo Ba Mogale community	The Pandora project was meant to conclude by 2007 and add to Lonmin’s target of 2 million oz of platinum group metals by 2007.	Fourth Three, z=2, t=0 Unsuccessful, still to be developed
2003	Loskop projects	Boynton (with Bakgatla)	This was a joint venture with Boynton (BEE) to develop the Loskop project (Lonmin, 2003)	Fourth Tier, z=1, t=0 Unsuccessful, not developed
2005	Messina mine	Incwala (Round One), Incwala/Shanduka (round two)	The Messina mine was acquired in June/July 2005. The acquisition was made for a total purchase price of \$192 million (Lonmin, 2005a: 2). The deal was a “partnership” between Incwala and Lonmin, meant to be Lonmin’s expansion project.	Fourth Tier, z=1, t=0 Unsuccessful, mothballed
December 2006 to February 2007	AfriOre Limited/Akanani project	Mvelaphanda, Incwala	Lonmin bought 100 per cent of AfriOre Limited, thus acquiring its primary asset, Akanani project located in Limpopo province. The consideration for that company was \$413 million. Lonmin took 74 per cent, while Incwala to 26 per cent “after paying...R800-million for it...with the intention of becoming an operational miner and not a passive portfolio investor” (Creamer, 2011).	Fourth Tier, z=2, t=0 Unsuccessful, not developed

Source: Compiled by author.

Table 21 outlines the investment and transformation outcomes of Lonmin's asset-level deals. None of these deals realised the intended investment by 2018. The Pandora deal stands as a third-tier investment with limited investment and eventual partnership collapse. Loskop, Messina, and Akanani are all fourth-tier assets, marked by no subsequent capital investment. This aligns with Typology B, demonstrating that the convergence of opportunistic I-firms and unstable BEE partnerships yield low subsequent investments. Further details about each of these deals are explored in the subsequent sections of the chapter.

Tracing asset level investments of Lonmin

8.5. Akanani joint venture with Incwala

Tracing the Akanani deal

In 2005, a junior mining company called AfriOre secured gold and platinum exploration projects in South Africa, including the Akanani project.⁹⁶ AfriOre owned 74 per cent of the project, while 26 per cent of Akanani belonged to a BEE group consisting of several investors

⁹⁶ AfriOre was a Virgin Islands domiciled junior (Shelley, 2006) listed on both the Toronto Stock Exchange and the AIM of the London Stock Exchange (Matrix, 2006).

(Fin24, 2006a).⁹⁷ In 2006, Lonmin bought 100 per cent of AfriOre, thus acquiring 74 per cent of its primary asset, Akanani project located in Limpopo, for \$441 million (Fin24, 2006b). The remaining 26 per cent of Akanani had to be separately bought from AfriOre's BEE partner (Fin24, 2006a). The portion was bought by Incwala Resources, "after paying the previous BEE partner R800 million for it...with the intention of becoming an operational miner and not a passive portfolio investor" (Creamer, 2011). To purchase its share, "Incwala announced it...had raised R900 million from local and international lenders to refinance the debt and redeem bridge financing it incurred in buying a stake in ... Lonmin's Akanani operation" (Hill, 2008). The Incwala partners were thus highly indebted after this deal, requiring debt refinancing shortly thereafter.

Lonmin planned to develop a low cost, fully mechanised mine (Webb, 2006). Initial mine development would start by producing around 250 000 oz of platinum, and an additional 250 000 oz per year of other platinum group metals. Attributable capital expenditure for mine, concentrator and infrastructure development was estimated at \$600-700 million (Webb, 2006). Significantly, a serious first step to becoming operational is committing a budget for capital expenditure, yet Lonmin did not report any budget for project development over a set number of years, despite estimating the development cost.

In June 2006, Akanani was awarded a new order exploration licence, giving the project a firm footing in terms of the security of lease rights (Webb, 2006). In 2007, Lonmin reported that "drilling at Akanani continues to confirm potential of the project" together with its "anticipation" that the Akanani deposit would be developed into a low cost, fully mechanised mine (Lonmin, 2007: 6). In the same year, Incwala told *Mining Weekly* that they were exploring pool-and-share possibilities with Amplats (Creamer, 2007b). Therefore, the deal appeared to have made some progress during its first year.

In 2007, Incwala announced that they would be jointly operating the Akanani mine with Lonmin, converting the Incwala entity from a Lonmin investment holding company to an operating company. As such, Incwala announced that it was "recruiting personnel at 'very senior' management level as well as personnel for an operational team at Akanani" (Creamer, 2007b). Once again, from the media statements, the deal looked intact, while Incwala appeared

⁹⁷ The investors are not specified, except one group called Catalyst. In the same year, the company concluded a deal with Ramaphosa's Shanduka on a gold project to explore undiscovered goldfields in an extension of the Witwatersrand basin, Johannesburg. Shanduka would act as a BEE partner (*Engineering News*, 2005b; Davenport, 2006; Dladla, 2006).

to be driving the process. That same year the World Bank IFC recognised Lonmin for its Incwala transformative deal.

However, by 2009, there had been little progress from an investment perspective. Instead, the Incwala partners crumbled under the weight of the debt incurred buying this project. The Akanani project was placed on hold, with the CEO of Lonmin, Ian Farmer, noting in the company's annual report that Akanani was being treated as a *longer* term growth project (Lonmin, 2009: 9). In 2010, Lonmin reported that it would only be turning to Akanani in 2011 to develop the growth opportunity (Lonmin, 2010: 6). With Ramaphosa/Shanduka effectively taking 26 per cent of Akanani, the expectation was that Ramaphosa would play a central active role in getting the project going, as his first step towards becoming a platinum mining operator. In 2011, Lonmin reported that "Shanduka is carrying out a study into reopening and developing the mine which was placed on care and maintenance in 2009" (Lonmin, 2011: 15). In effect, Shanduka had picked up where the first round of Incwala partners left off.

In 2011, Lonmin reported that Akanani was undergoing an evaluation process (Lonmin, 2011: 5), emphasising that the project was a longer term prospect (Lonmin, 2011: 10). "Exploration and studies continue to develop a viable operation on this project..." (Lonmin, 2011: 15). In 2012, Lonmin reaffirmed its strategy of developing Akanani as a viable operation (Lonmin, 2012: 17). It repeated the same words in 2013 and 2014 (Lonmin, 2013: 9, 2014: 15). However, even at this point its annual reports failed to report a budget under its capital expenditure section.

In 2014, ahead of the mining law 26 per cent BEE target deadline, Lonmin presented Akanani as a project controlled by Shanduka through Incwala, even though Lonmin retained 74 per cent of the asset (Lonmin, 2014: 60). By 2018, there had been no change in the operational status, no capital expenditure and no production delivered by the project.

Conclusion: How does the deal fare in light of the hypothesis?

Lonmin's opportunistic nature and inherent short-sightedness limited the possibility of high sustained investment. However, one might argue that its BEE partners could not deliver enough growth opportunity or operational aspiration. Clearly, though, the Incwala model was not designed to become a self-standing company: it was and remained an arm of Lonmin. As the principal owner, it could have sunk investment in the Akanani project, but from the hypothesis perspective this was unlikely. Lonmin thrived on managing BEE rules, including inviting BEE partners that would protect its status quo assets. These are not partners Lonmin expected would

be farsighted investors who would want to truly become operators. It is not that the BEE partners could not become operators, but rather that Lonmin chose partners who would play no role beyond rent-sharing and protecting the company. Typology B expects that a combination of opportunistic I-firm and E-firm results either in low investment or deal collapse.

Table 22 – Intended versus actual capital investment expenditure on the Akanani project

Asset	Intended/announced investment (+year)	Actual investment 2006-2008	Actual Investment 2009-2013	Actual Investment 2014-2018	Total
Akanani	2006 Mine development cost: \$600-million and \$700-million (Webb, 2006)	\$0	\$0	\$0	c.\$0
Total	Underinvested asset. Failed deal. Fourth Tier deal.				

Source: Compiled by author using Lonmin’s annual reports (2006-2018) and triangulating with market announcements (SENS) and media reports.

Table 22 summarises the tracking of fixed investment sunk in the Akanani project. The outcome of this deal, a fourth-tier investment, essentially means that where there is a bad partnership. The deal will be too unstable to materialise into investment. The Akanani deal was a lost investment opportunity for South Africa during the 2000s commodity price boom.

8.6. The Messina mine

2005-2010 period

In 2004, mining media reported that SouthernEra was reorganising its assets portfolio, including potentially disposing of its platinum asset, the Messina mine, which was reported to have a production growth potential of 300 per cent between 2003 and 2006 (News24, 2004). In April 2005, Lonmin – and Incwala as BEE partner – announced its move to acquire the Messina mine (Guha, 2005). The transaction was completed in September 2005 for R486 million (*Mining Weekly*, 2005). Lonmin acquired the asset to drive its production to around one million ounces of platinum in 2006 (Lonmin, 2006b). In its 2005 annual report, Lonmin noted that Messina had been identified as a high quality asset that it could develop with its own technical and operational capabilities (Lonmin, 2005b). That year, the mine began production, and Lonmin reported that it had begun reengineering the mine to facilitate full mechanisation

to reduce costs (Mining Weekly, 2005).⁹⁸ Therefore, Lonmin had bought a good brownfield asset and had major plans requiring substantial capital investment on the mine.

In 2008, however, Lonmin placed the mine on care and maintenance, reporting constrained production at the mine due to “lack of ore reserve development” (Lonmin, 2008a: 9). The company hinted at selling the mine, saying that “[w]e believe the mine is uneconomic and intend to start discussions with the workforce and unions regarding the future of the operation” (Lonmin, 2008a: 9). The suggestion to sell failed, for unstated reasons, but perhaps partly owing to the global financial crisis. In 2009, Lonmin’s CEO Ian Farmer described Messina as a longer term growth project (Lonmin, 2009: 9). In 2010, Lonmin reported that it would be turning to Messina in 2011 as a growth opportunity (Lonmin, 2010: 6).

2011-2012: Big plans with Ramaphosa. Getting Shanduka hands on

In 2011, Lonmin announced an agreement with Shanduka to explore the feasibility of managing and operating the Limpopo mine, in addition to the Akanani mine (Lonmin, 2011: 5). The agreement was the same as with the previous Incwala partners: Shanduka was to take care of the mines and projects already acquired by Lonmin, turning them into profitable mines, while Lonmin’s management would focus on the main asset, the Marikana complex (Lonmin, 2011: 10). To ensure that Lonmin complied with the ownership target of 26 per cent owned by BEE, the plan was that Shanduka would take on a higher ownership stake in the Messina mine, a plan that Lonmin shared with the DMR (Lonmin, 2011: 11).

At the end of the year, we reached an agreement with Shanduka on Limpopo [Messina]. The proposed transaction gives Shanduka the opportunity to gain a controlling equity interest in Limpopo and become a PGM mining and operating company, in line with DMR objectives. Ultimately, it gives Shanduka the opportunity to manage and operate the Limpopo [Messina] division...[This] creates the potential opportunity for Shanduka to become a Black Economic Empowerment (BEE) PGM mining and operating company, in line with the DMR’s empowerment objectives (Lonmin, 2011: 11, 19).

The agreement also relied on Shanduka raising and contributing R1.1 billion in funding towards the ramp up and development of the operations. Shanduka was also entitled to acquire control and operational management of the operating entity (Lonmin, 2011: 29). During this

⁹⁸ In the 15 weeks from the date of purchase (15 June 2005), Limpopo produced 214,000 tonnes (11,524 ounces of platinum and 25,741 ounces of platinum group metals) (Lonmin AR 2005: 11).

time, no investment went into the asset. Analytically, this demonstrates why, at the deal level, investments that were announced during the commodity price boom did not materialise, and why others succeeded.

2012-2018: The deal did not materialise

In 2012, Shanduka delivered a feasibility review of the mine showing a positive net present value. In response, Lonmin reported that it had not yet independently peer reviewed the report (Lonmin, 2012: 17). In its annual report of 2013, Lonmin referred to Messina as “formerly an operational mine”, confirming the status of the asset during this period. In the report, Lonmin reemphasised the agreement with Shanduka to turn around the mine and take a controlling stake (Lonmin, 2013: 9). A year later, Lonmin announced that Shanduka was reworking its bankable feasibility study and the Shanduka board would return with a decision. Lonmin placed a deadline for Shanduka to exercise its option by March 2015 (Lonmin, 2014: 177). In 2015, Lonmin extended the deadline to 30 April 2016 due to Shanduka merging with Phembani (Lonmin AR 2015:47). By 2018, even after the merger, the asset remained mothballed.

Conclusion: How does the deal fare in light of the hypothesis?

Part of what the mining law meant to achieve was to drive investment upward in mining through the “use it or lose it” principle. The idea was to disincentivise hoarding of mineral rich rights for other developers who could capitalise the opportunities. The Messina mine opportunity appears to be related to such a situation, where an investor continually announces future plans to invest, but never gets around to do it. It is possible that Lonmin was genuinely trying to get its BEE partners assets to become operating entities, but this would not conform with the broader corporate strategy of Lonmin, and its design of Incwala.

Table 23 – Intended versus actual capital investment expenditure on the Messina mine

Asset	Intended/announced investment (+year)	Actual investment 2005-2008	Actual Investment 2009-2013	Actual Investment 2014-2018	Total
Messina/ Limpopo	2005: Lonmin plans to spend \$75 million over the next three years on the development of the Messina Phase I projects (Mining Weekly, 2005)	\$3 million	\$0.00 “The Limpopo assets have not produced an ounce of platinum group metals since 2009” (Matomela, 2011)	\$0.00 Mothballed: care and maintenance	c.\$3million, far below the \$75 million due to be spent on the Phase 1 project
Total	Underinvested asset. Failed deal. Third deal.				

Having carefully studied each annual report by Lonmin, as well as market reports, and Nedbank's annual list of all capital mining investments in South Africa, Table 23 presents the findings.⁹⁹ Compared to \$75 million capital expenditure Lonmin announced it would spend on Messina between 2005 and 2008, the company only spent \$3 million during that period, and then placed the mine on care and maintenance. This overall story of the Messina mine corresponds with both the period when Messina was in production (2005-2008), and the period thereafter when the mine was idle. The Messina story is a third tier investment story, a deal with one round of low investment. This is also a deal that promised transformation into a mine operated by a BEE partner, but which did not materialise. The outcome corresponds with the overall story of Lonmin's opportunism, poor partnerships and as a result, unstable deals.

8.7. Pandora joint venture deal: Lonmin's perspective

Tracing the Pandora deal

In 2000, with the platinum industry ramping up production, Lonmin, Amplats, and Northam came to a deal to establish the Pandora platinum project. In terms of ownership, Lonmin and Amplats had 45 per cent each, and Northam had 10 per cent. The property abutted Lonmin's Marikana complex, as shown in Figure 26 above. This was also a period when mining I-firms presented their deals to the Department of Minerals and Resources (DMR). The DMR rejected the ownership structure of the deal because it did not involve BEE partners or the local community on whose land the project was located (Fin24, 2004b). During this period (2002-2004), the DMR required mining companies to show how they would meet targets to transfer 15 per cent equity by 2009. The sooner a company complied, the sooner the conversion of the company's or project's mining rights could be completed. This problem was resolved by allocating the community (the Bapo ba Mogale community) 7.5 per cent stake in the project. Northam also had a BEE partner, Mvelaphanda Resources, which agreed to house Northam's shares of a revised 7.5 per cent until the conversion of rights. Lonmin reduced its stake to 42.5 per cent, so did Amplats. Lonmin would be the mine operator, leveraging its infrastructure in its Marikana mining complex (Lonmin, 2012: 1).

From the conclusion of the deal in 2000, Lonmin's annual report noted that Pandora was integral to its long-term production plan. Expressions of long-term expansion plans were expected of platinum producers because of the greenfield opportunities and indications of

⁹⁹ For example, see Nedbank Group Economic Unit (2017).

rising platinum prices. Amplats also announced major expansion plans during this period (See Chapter 6), also citing Pandora as a deal it hoped would contribute to scaling up production. Mine construction was intended to start on 1 July 2001, by using and expanding existing infrastructure owned by Amplats and Lonmin. The capital expenditure would be R2.8 billion in 2002 terms (R3.3 billion in 2004 terms), with Amplats providing only its portion of the capital and refining only its portion. The mine would have an expected life of 30 years.

However, Lonmin's 2004 annual report excluded Pandora from its future production growth targets. CEO Brad Mills was confident Lonmin would be "delivering more from our current infrastructure at better capital returns and lower costs than a major Greenfield development at Pandora" (Lonmin, 2004: 7). In place of Pandora, Lonmin managed to develop a "New Mine Extraction Plan" and a "Mechanisation and Automation strategy" that would exploit its current assets" (Lonmin, 2004: 11–12). In terms of the sequence of events described thus far, this change probably signalled a lack of commitment from Lonmin, which was responsible for running the project. That said, from this study's theoretical expectations, an opportunistic I-firm would prefer to sweat its assets to extract maximum value than embark on long term greenfield investments. Reflecting back on the Akanani deal, which came later in 2006, the question is: did Lonmin really intend to take on new projects, given Mills' statement above?

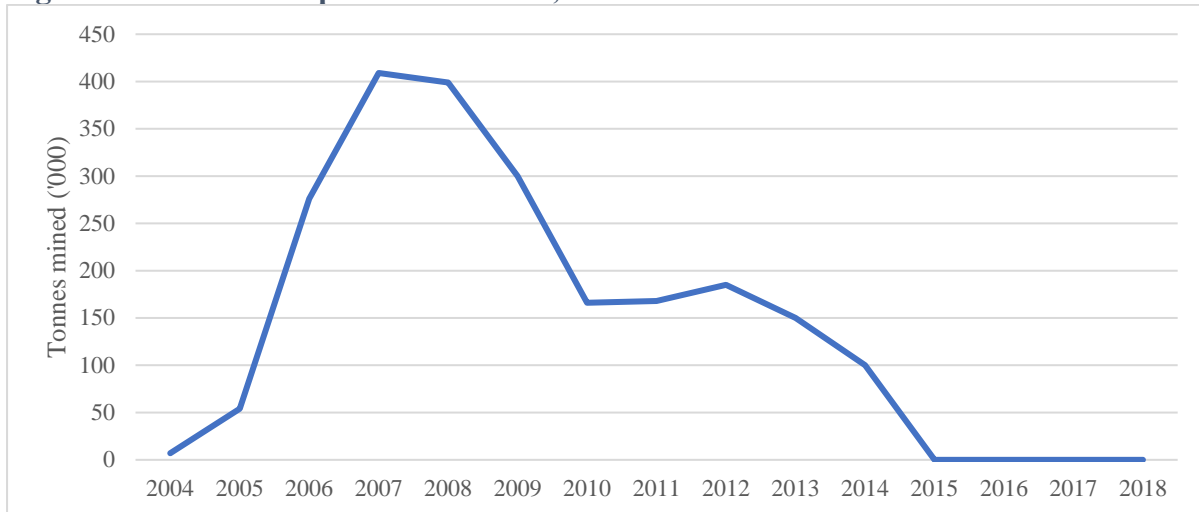
In 2005, Lonmin noted a shift in plans that directly affected the future ownership structure of Pandora. Using Incwala as a vehicle, Lonmin planned to acquire a controlling stake in Mvelaphanda Resources, the BEE partner housing 7.5 per cent of the Pandora project. Acquiring Mvelaphanda would have brought Lonmin closer to the DMR, which had a good relationship with Mvelaphanda (Fin24, 2004b). The deal would have also increased Lonmin's stake in Pandora to a controlling share, perhaps shifting the scales on its commitment to the project. Other lucrative reasons included the assets under Mvelaphanda, as well as future BEE deal flow. Consequently, Incwala's CEO Arne Frandsen announced on 22 December 2005 that Incwala would buy a 23 per cent stake in Mvelaphanda Resources for R760 million, including taking over Mvelaphanda's management contract and the right to appoint Mvelaphanda's chief executive and chief financial officers (Reed, 2005). On 23 February 2006, Mvelaphanda's CEO Pine Pienaar anticipated that "the deal between its parent company, Mvelaphanda Holdings, and Incwala Resources would be consummated by the end of March [2006]" (Mawson, 2006).

However, on 27 February 2006, Incwala's Frandsen and Mvelaphanda's Pienaar publicly divulged the tension in the deal. Both companies were BEE dealmakers and were poised to

compete for the same deals. To assure Mvelaphanda, Frandsen said that “Incwala did not have any ambitions of becoming an operating company. He added that Incwala might actually be well placed to assist Mvela in structuring and financing deals” (IOL, 2006b). On 3 April 2006, the Mvelaphanda Group announced that the deal with Incwala had collapsed. In order to agree to the deal, Mvelaphanda required Incwala to “offer all new business opportunities in the resource sector to Mvela Resources ... until April 2009” (Mail & Guardian, 2006). The Pandora BEE partners temporarily parted ways. Meanwhile, the Pandora project was hardly making improvements in development. It remained undercapitalised and delivered limited production. It appeared that the deal was not stabilising in a manner that supported investment for this greenfield project.

In 2007, the founding leadership of Incwala exited Lonmin/Incwala to establish a separate (controversial) platinum company (See Section D). The following year the new leadership of Incwala, the BEE partners, approached Mvelaphanda Resources for a merger (Mail & Guardian, 2008). Had this second attempt succeeded, it would have saved Incwala from collapse, but might also have brought the Pandora project firmly within the control of Lonmin. The Incwala/Mvela deal did not materialise. It appears that the sum of this unstable deal contributed to further underinvestment of the Pandora project. In 2008, Lonmin reported a decline in production from Pandora, but an operating profit of \$18 million to itself from the operation (Lonmin, 2008b: 9). Further decline in production was announced in the following year. In 2010, Lonmin reported its intentions to focus on Pandora post 2013 as a growth project (Lonmin, 2009: 10), although in 2011 it reported some work to extend the life of the mine to 2029. No specifics nor expenditures were stated (Lonmin, 2011: 25). In 2014, Amplats announced its intention to exit the Pandora JV (IOL, 2014). In 2016, Amplats announced the sale of its Pandora shares to Lonmin, officially exiting the joint venture in 2017.

Figure 30 – Pandora’s production trend, 2004 – 2018



Source: Compiled by Author using Lonmin annual reports

Figure 30 shows the production statistics provided by Lonmin. Read in conjunction with Amplats’ annual reports, the project was in elementary production stage, hardly adding significant tonnage to the I-firms’ annual production output. Therefore, the bulge in the figure is not of relative significance. What is evident is that the project kept declining from 2007-08 and failed to recover. By 2015, the project had stopped operating despite Lonmin’s later efforts to restructure Pandora and use the asset to show its shareholders that the company remained a growth opportunity.

Conclusion – How does the deal fare in light of the hypothesis?

Table 24 – Amplats’ share of investment in Pandora project, 2001-2018

Asset	Intended/announced investment (+year)	Actual Investment 2001-2007	Actual Investment 2008-2014	Actual Investment 2015-2018	Total
Pandora project	<p>2002. R2.8 billion in 2002 terms</p> <p>2004. R3.3 billion in 2004 terms</p>	R35.1 million	R252 million	R0	Huge (billions) worth of underinvestment in the project. Amplats’ share of investments totals c.R287.1 million. Together with JV partners, the investment estimate is c.R574.2 million.

Source: Author’s calculations from Northam Annual reports.

Lonmin did not provide capital investment data on the project (its portion of contribution as a partner). However, the information above suggests that the outcome of the deal can be classified as Tier 3: a deal with low investment that eventually crumbles ($z=2, t=0$). Reflecting back on the hypothesis and the theoretical framework, the story of the Pandora deal highlights

the instability or “deal mess” associated with an opportunistic I-firm, but also with opportunistic E-partners. Amplats, as a partner in the deal, mostly reported optimistically about the deal, including reporting its own share of capital investment, though dying out very quickly. It is unclear if Amplats played any other role in supporting or compromising the deal.

8.8. Loskop JV with Boynton (and the Bakgatla)

The Loskop project serves as a prime example that substantiates the hypothesis in deals that fail to gain momentum. Despite minimal progress, the significance lies in its ability to shed light on how agreements involving opportunistic partners often encounter challenges in achieving the necessary stability and resilience to foster substantial investment.

The Loskop project was a 50-50 joint venture deal between Lonmin and black-empowered Boynton Investments (Lonmin, 2009) ¹⁰⁰. Lonmin first mentioned the project in 2005 when the company reported discovery of platinum ore in the area (see map in Figure 26). The project was a greenfield opportunity for Lonmin (Lonmin, 2005b: 16). During this time, Incwala was under the leadership of Arne Frandsen.

As previously mentioned, in 2007 the Incwala founders Arne Frandsen (CEO) and Brian Gilbertson (Chairman) left Lonmin to focus on their newly established company, Pallinghurst Group, to exploit resources in the Bakgatla ba Kgafela areas (Mnwana, 2014) (See Chapter 11). ¹⁰¹ Soon after Pallinghurst was founded, it bought a controlling stake in Boynton. ¹⁰² This made Pallinghurst and Lonmin partners in the Loskop project. As Chapter 11 will show, Pallinghurst became known for its collusive deals with predatory chiefs and was dragged to court over several deals. This did not bode well for the stability of the Loskop deal.

Although Lonmin divulged little detail on the project in its annual reports, in 2010 and 2011 the company reported that the project was part of its assets. However, in 2014, Lonmin announced that it had “held arbitration proceedings against Boynton on the basis that it failed to comply with its promise to deliver an unencumbered asset to the joint venture. We are currently awaiting the arbitrator’s decision.” (Lonmin, 2014: 177). It appears that the unravelling of Pallinghurst’s deals with predatory chiefs presiding over concerned mining

¹⁰⁰ Boynton Investments was owned by a Canadian junior miner, Platmin, with BEE partner Moepi group of companies.

¹⁰¹ IDC followed the duo in funding the company with R3.24 billion (Creamer, 2012).

¹⁰² Pallinghurst bought a controlling stake in the parent company of Boynton, Platmin (Pallinghurst Resources, 2008)

communities had also reached the Loskop deal. Lonmin's statement suggests that only later did it discover that the asset was "encumbered". As a result, in 2015, Lonmin reported that the partnership lost the rights to Loskop, because the DMR declined to renew the application submitted by Boynton. Lonmin also reported that it would continue with arbitration against Boynton (Lonmin, 2015: 47).

Conclusion

The Loskop deal succinctly illustrates the hypothesis: deals among opportunistic partners often lack the necessary resilience to support substantial capital investment due to their shared nature. This propensity for partnering with like-minded entities compromises the prospects of success, evident in the absence of any tangible investment outcomes. It is crucial to acknowledge that the rule of law emerges as a pivotal tool for resolving deal-related complications, underscoring the courts' significant role in the deal-making landscape. In essence, this scenario conforms to a fourth-tier deal classification – an agreement forged but void of subsequent investment actions.

8.9. Conclusion: Deciphering Lonmin's deal dynamics

The empirical exploration of Lonmin's dual-level deals underscores the overarching depiction of Lonmin as an opportunistic player. While the analysed period was marked by hindrances such as inadequate infrastructure, bureaucratic hurdles, and financial constraints, the hypothesis and research approach have delved deeper, revealing nuanced deal-level dynamics that elucidate the fluctuations in deal and investment outcomes.

In terms of investment performance, the Marikana asset, underpinned by Lonmin's corporate-level agreements, represents a narrative of substantial investment during its developmental phase in the 1990s, followed by relatively stagnant annual growth. Although the mine was intricately developed, boasting the capacity for significant output that could reap handsome returns during the 2000s commodity price surge, Lonmin refrained from considerable expansion investments beyond essential shaft replacements.

Examining asset-level deals, the investigation unveils scant evidence of substantial or even moderate investment across any of the deals. The Messina mine and the Pandora project bore witness to minimal investment, missing out on capitalising on the commodity price surge.

Akanani and Loskop projects, on the other hand, exemplify missed greenfield investment opportunities, as Lonmin grappled to establish lasting stability with its partners.

In essence, Lonmin failed to grasp the value of cultivating dependable, production-focused BEE partners distanced from contemporary political powerbrokers. Such forward-looking strategies are not intrinsic to Lonmin's corporate DNA. This comprehensive analysis underscores how Lonmin's deal dynamics align with its opportunistic tendencies, revealing a landscape marked by missed opportunities and suboptimal partnership choices.

SECTION D – Deals with mining communities

CHAPTER 9 The Bafokeng and the Bakgatla - community corporatisation under developmental and predatory leadership

This chapter serves as a comprehensive case study of the Royal Bafokeng and the Bakgatla ba Kgafela communities as BEE partners of Amplats. The case study traces the evolution of these communities from historical marginalisation and land dispossession to their eventual transformation into corporate entities actively engaged in the commercialisation of their platinum resources. Within this context, the chapter accentuates the intricate interplay of various critical elements, including patient-oriented incumbent firms (I-firms), visionary and patient traditional leadership, and the supportive framework of the rule of law.

The chapter consistently underscores the significance of these components in fostering the development of coherent and mutually beneficial partnerships. For instance, the Royal Bafokeng's success story is attributed to the alignment of patient I-firms, steadfast traditional leadership, and the rule of law, all of which enabled the community to assert their rights, negotiate favourable agreements, and ultimately translate their platinum resources into substantial economic gains. In contrast, the Bakgatla ba Kgafela community's journey faced challenges stemming from predatory leadership, impeding their ability to fully harness their resources and establish equitable arrangements.

The case study findings underscore the vital role these elements play in shaping successful partnerships and realising collective benefits.

9.1. Introduction

Section D continues the story of Amplats' I-patient world. It documents the important role of land-owning, mining communities in the platinum belt. The case studies demonstrate the dynamics of deals between an incumbent and communities as BEE partners.

How did the communities corporatise successfully to engage as BEE partners in mining deals? This chapter documents the stories of two landowning communities in the platinum-rich areas where Amplats leases some of its mining rights. The two communities are the Royal Bafokeng and the Bakgatla ba Kgafela, both BEE partners with Amplats. Both communities (each consisting of several villages) are located in the North West province, and each number about

300,000 residents (Roberts, 2020). housing approximately 300,000 residents, are located in the North West province (Roberts, 2020). By studying these communities, the aim is to ascertain how successful corporatisation empowered them to engage effectively in BEE partnerships within the mining sector. The study further examines how the variation in leadership across the capital spectrum influences the outcomes of these deals.

The examination of communities as BEE partners holds significant importance for the following reasons:

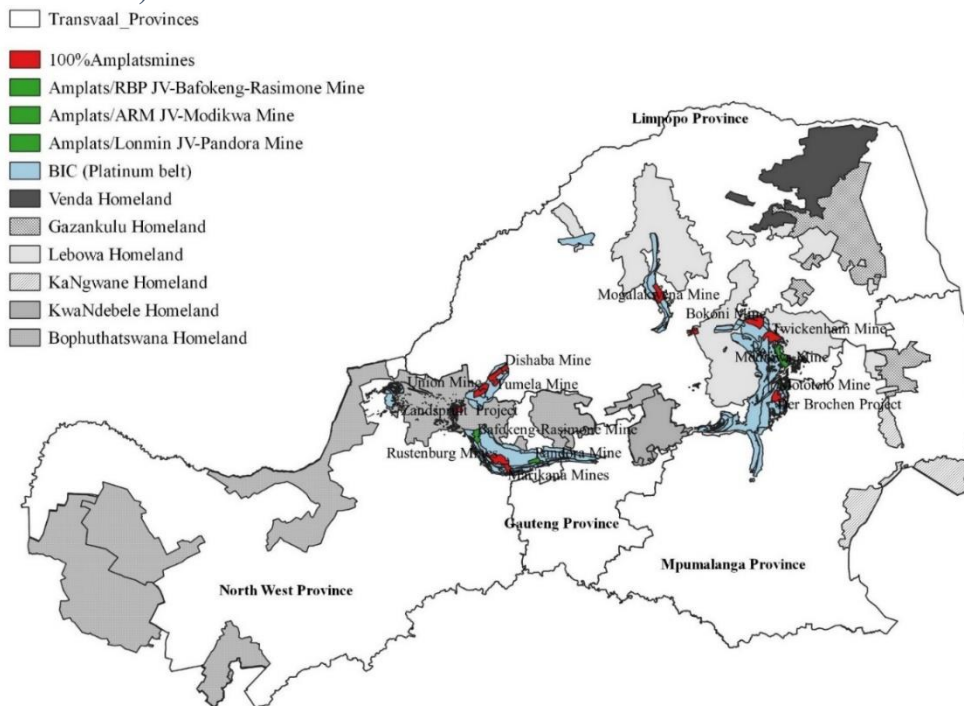
1. **Understanding corporatisation:** This study offers insights into the complex process of transforming platinum-rich land-owning communities into corporate entities. It sheds light on how communities transition from historically marginalised positions to active participants in the economic landscape through the commercialisation of their resources.
2. **Testing hypotheses on leadership:** By scrutinising both individual BEE partners and tribal community leaders, this research tests the hypothesis that leadership orientation varies across the patient-predatory capital spectrum. Such variation has direct implications for the outcomes of BEE deals, investments, and the broader transformation of the industry.
3. **Role of rule of law:** The research underscores the essential role of South Africa's relatively robust rule of law in facilitating asset-level deals within the BEE framework. Furthermore, the cases demonstrate that the struggle for improved BEE deals by communities often takes place in the legal sphere, providing explicit evidence of the law's impact on BEE agreements.
4. **Organisational dynamics and leadership impact:** The community case studies offer valuable insights into how land-owning communities can effectively organise themselves under cohesive leadership to assert their interests within the BEE landscape. Simultaneously, the cases also highlight the detrimental role played by predatory leaders who undermine the collective benefit.
5. **Coherency and successful transformation:** The cases illustrate how a high degree of coherency within mining land-owning communities can translate into successful investments and transformative outcomes. By analysing the factors contributing to such coherency, researchers and stakeholders can draw lessons for driving positive change.

These reasons collectively emphasise the significance of studying communities as BEE partners, shedding light on the intricate dynamics, leadership orientations, legal implications, and outcomes of such partnerships within the broader context of economic empowerment and transformation.

9.2. Historical outline of community landownership, homelands, and the platinum belt

Platinum's discovery in 1924 within the North West Province (formerly Western Transvaal) marked a crucial historical point. Amplats and its counterpart, Impala Platinum (Implats), held mineral rights overlapping with the lands owned by the Bafokeng and the Bakgatla communities. The boundaries of the fragmented Bophuthatswana homeland were situated within this region. To comprehend the communities' history and their subsequent interactions with I-firms, it is essential to delve into the historical context of land ownership dating back to the 1800s.

Figure 31 – The Bushveld Igneous Complex and the homelands in northern (former Transvaal) South Africa



Source: Nxele, 2022

From the 1600s onwards, black communities in South Africa faced dispossession of their lands, resulting in spatial marginalisation. This intensification culminated in the enactment of the Natives Land Act of 1913 and the Native Trust and Land Act of 1936, which forcibly relocated black people to less valuable lands, known as homelands or Bantustans (Manson, 2013). However, in the 1860s, certain regions of the North West province provided an opportunity for black people to acquire farmland through missionary mediation on a tribal basis. These acquisitions were registered under the chief's name, who held traditional authority (Manson, 2013).

Missionary facilitation persisted until 1881, after which land could only be purchased under the representation of a state functionary. Chiefs acted as representatives for their tribes, allowing Transvaal-based black people to continue purchasing land outside the designated areas stipulated in the 1913 and 1936 Land Acts. Numerous farms, over 80 in the Rustenburg region alone, were acquired through this mechanism (Manson, 2013).

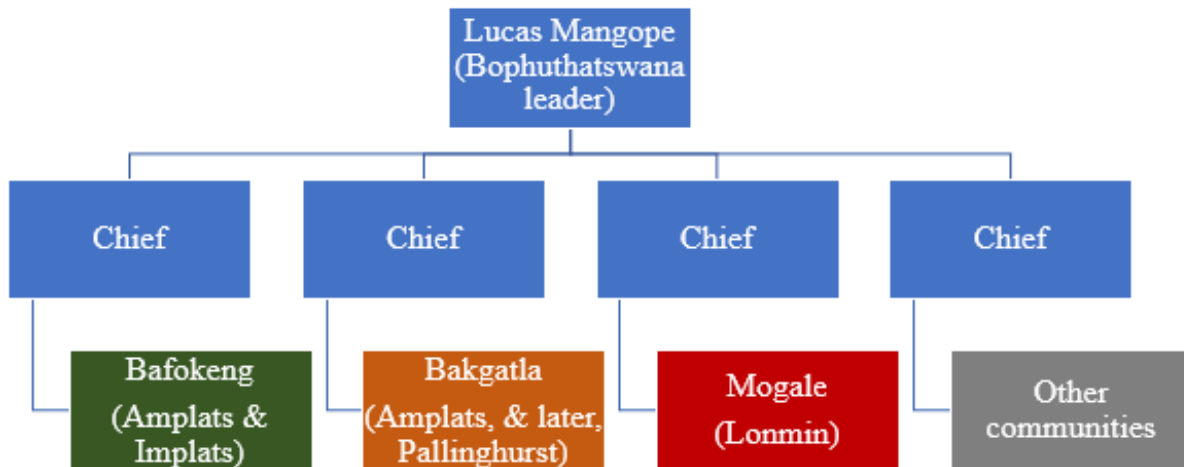
In the 1990s, platinum deposits were found in these lands already owned by communities. Large mining companies like JCI (Amplats) and Gencor (Implats) bought prospecting rights from chiefs to capitalise on this discovery (Manson, 2013). Hence, for decades, incumbent firms profited from leasing mining rights owned by these rural communities and the government.

9.3. Bophuthatswana and the Bafokeng under the leadership of Lucas Mangope

The apartheid-era plan to establish homelands aimed at gradually declaring each homeland an independent self-governed state. Consequently, the Bophuthatswana homeland, comprising various villages, including the Bafokeng and Bakgatla, gained independence in 1977. This period coincided with ongoing platinum mining by Anglo, Gencor, and later Lonrho, within the area. Under President Lucas Mangope's oversight, the homeland operated as a separate government sanctioned by the apartheid regime, effectively controlling the jurisdiction where all mines operated (African Business, 1994). Mangope governed this region while allegations of misappropriation, land expropriation, and maladministration marred his leadership. Despite a temporary overthrow in 1988, Mangope was reinstated by the South African Defence Force (Manson & Mbenga, 2003).

In 1988, Mangope's government was designated the official trustee of all communities in Bophuthatswana, consolidating royalties into a centralised treasury under his purview. This consolidation bestowed unilateral decision-making power upon Mangope and his tribal chiefs, allowing them to dictate mining deals (Manson & Mbenga, 2003). Mangope's suppression of the National Union of Mineworkers (NUM), founded by Ramaphosa, solidified his position as the exclusive dealmaker, a scenario conducive to the leading platinum producers in the region: Anglo Platinum, Impala Platinum, and Lonrho (African Business, 1994).

Figure 32 – The hierarchical governance arrangement in the former Bophuthatswana homeland



Source: Author.

Mangope wielded the authority to appoint compliant community chiefs, often unseating existing chiefs and replacing them with subservient siblings. This practice was exemplified in the Bafokeng community, where Chief Edward Lebone Molotlegi resisted Mangope's government and later opposed a deal with Implats over Bafokeng land. Implats had enjoyed favourable terms negotiated by the tribal authority, overseen by the Minister of Bantu Affairs, since the mid-1960s (Capps, 2012). However, as Impala's success soared in the mid-1980s, they aimed to expand into a new, untapped portion of the Bafokeng reserve. The Bafokeng chief contested past royalty payments and impeded the expansion. Implats sought Mangope's intervention, leading to the Bafokeng chief's exile in Botswana. Mangope replaced him with his compliant brother, George Molotlegi, ensuring uninterrupted access to mining windfalls (Manson & Mbenga, 2003; Capps, 2012).

However, the transition to democracy reintegrated the homelands with South Africa, and traditional leaders, including Mangope, resisted this change to preserve their authority and platinum rents. In 1994, Mangope's ousting enabled the Bafokeng to reclaim control over their political and economic matters (Manson & Mbenga, 2003). The fall of Mangope allowed Chief Edward Lebone Molotlegi to return and challenge the deals signed by Mangope with Implats and Amplats. While Molotlegi passed away in 1995, his successors, Chief Mollwane Molotlegi (1995-2000) and Chief Leruo Molotlegi (since 2000), continued to seek the benefits rightfully belonging to the Bafokeng community.

This transition brought up issues of royalty payments and renegotiation of mineral agreements made during Mangope's reign. The Bafokeng, who owned 84 per cent of Impala mine's lease area, expressed dissatisfaction with their royalty agreements with Impala Platinum and, to a lesser extent, Anglo Platinum. They also raised concerns about over R400 million in missing royalties channelled to Mangope's treasury by Implats and Amplats (African Business, 1994). The Bafokeng's displeasure stemmed from years of unaddressed financial imbalances, with Impala's cumulative royalties dating back to the late 1960s and smaller contributions from Amplats due to their smaller lease area.

9.4. How did the Bafokeng assert their rights and successfully “corporatise”?

Following the fall of Lucas Mangope, a legal battle between the Bafokeng and Implats ensued. The Bafokeng contested Implats' historical agreements with the Mangope government over their land and questioned their legal ownership. Implats argued that the Bafokeng were beneficiaries of a trust rather than outright owners. After years of litigation, in 1999, the Royal Bafokeng Nation settled out of court with Implats, securing a landmark agreement. Under this agreement, the Bafokeng were entitled to a 22 per cent royalty on all platinum extracted from their territory, and they became major shareholders in Implats with board representation (Implats, 2002; Manson & Mbenga, 2003). This transformational deal turned the Bafokeng community from being marginalised to becoming one of South Africa's wealthiest. Their stake's value in Impala tripled to over \$50 million by 2001, with annual royalties of around \$63 million due to Implats' status as the world's second-largest platinum producer (Commey, 2014).

The Bafokeng established strong relations with experienced individuals in the mining industry, such as Steve Kearney, who played a pivotal role in negotiations with both Implats and Anglo American Platinum (Moneyweb, 2020). As the chairman of Royal Bafokeng Resources (RBR), Kearney ensured that the Bafokeng benefited from fair and transparent negotiations, along with a clear understanding of their legal land and mineral ownership (Royal Bafokeng Holdings, 2020). By the early 2000s, the Bafokeng community had achieved internal cohesion, allowing them to present a unified front as a BEE partner. They continued to engage in various BEE deals, expanding their wealth and commercial interests while mining companies sought improved community relations and land access (Bowman, 2019). A significant development occurred in 2005 when Implats offered the Bafokeng a 30 per cent discount on Implats shares, worth an estimated R5 billion, aligning with new legislation requiring mining companies to

have 26 per cent of their shares held by black South Africans within a decade (Meldrum, 2005). Responding to rumours of government seizure of mining royalties, the Bafokeng converted their royalty agreement into an equity share in Implats in 2007 (Moneyweb, 2020). Through their investment vehicle RBH, they diversified their portfolio to encompass financial services, real estate, infrastructure, and telecommunications (See Table 25).

Table 25 – The Royal Bafokeng Empire

Company	Year of registration	Operating Status as at 2022	Industry	Notable Crossholdings	Notable Acquisitions
Royal Bafokeng Resources	2002	Active	Mining of Platinum Group Metals	Govt. Employees Pension Fund	Not stated
Royal Bafokeng Management Services (Pty) Ltd	2002	Active	Financial Intermediation	RBN Development Trust	Not stated
Royal Bafokeng Finance	2004	Voluntary Liquidation	Financial Intermediation	RBN Development Trust	Zurich Insurance Company SA Ltd (2009)
Royal Bafokeng Capital (Pty) Ltd	2005	Active	Other Financial Intermediation	JSW Energy Ltd	Zaptronix Ltd (2007); Yomhlaba Resources (2007)
Royal Bafokeng Holdings (Pty) Ltd	2006	Active	Financial Intermediation	RBN Development Trust	Bafokeng Rasimone Platinum Mine (2008)
Royal Bafokeng Sports	2006	Active	Hotels, Camping Sites	Cross Point Trading	Not stated
Royal Bafokeng Platinum Holdings	2007	Active	Financial Intermediation	RBN Development Trust	Bafokeng Rasimone Platinum Mine (2008)
Royal Bafokeng Platinum Ltd	2008	Active	Mining of Platinum Group Metals	Govt. Employees Pension Fund	Maseve Investments (2017)
Royal Bafokeng Platinum Management Services (Pty)	2009	Active	Mining of Platinum Group Metals	Govt. Employees Pension Fund	Not stated
Royal Bafokeng Resources Properties	2012	Active	Real Estate Activities with Own Property	Govt. Employees Pension Fund	Not stated
Royal Bafokeng Housing	Not stated	Not stated	Fund	Public Investment Corporation SOC Ltd	n/a
Royal Bafokeng Metair Trust	Not stated	Not stated	Trust	RBN Development Trust	n/a
Royal Bafokeng Nation Development Trust	Not stated	Not stated	Trust	Moumo Integrated Development, Platinum Stars FC	n/a
RBN Platinum Province BBBEE Trust	Not stated	Not stated	Trust	YeboYethu (RF) Ltd	n/a

Source: Author. Compiled from *Who owns whom*.

Patient BEE partners with Amplats, the Bafokeng actively participated in the construction of the Bafokeng mine and became joint operators once the mine was operational. After listing Royal Bafokeng Platinum on the JSE in 2010, the company eventually assumed full control of Bafokeng mine operations.

9.5. The remarkable success of Bafokeng leadership

The process of South Africa's democratisation led to the reintegration of homelands into the nation. Land-owning communities, particularly those in mining areas, aspired to gain control over the generated revenue. While few communities succeeded in doing so, the Bafokeng corporatised effectively, challenging incumbent I-firms in court and securing their rights. Despite nationalising mineral rights under a development program, the presence of land-owning communities posed challenges in determining surface rights ownership. To address this, alongside new mining and BEE laws, the government enacted legislation that vested decision-making power in community chiefs. While the mining law transferred control from

homeland leaders to the national government, communal areas' governance fell to provincial premiers and communal trusts, which received mining deal windfalls. This framework facilitated corruption and opaque deals, with mining companies, the ANC government, and tribal chiefs concluding agreements without proper oversight (Claassens, 2019).

Despite opportunities for personal enrichment, the Bafokeng leadership chose community development, transforming the Bafokeng into one of South Africa's most empowered communities. This case supports the proposition that BEE partners differ in their approaches to accumulation and transformation. The ability to find partnerships between incumbents and communities that can navigate tensions, resist temptations, and establish stable deals is rare. Given the prevalence of platinum in these areas, understanding the dynamics of platinum land-owning communities is central to studying platinum deals and investments.

9.6. The Bakgatla-ba-Kgafela community and Amplats

Amplats, through JCI, also held a valuable asset called the Union mine in the North West, located within the Bakgatla community's land. The Bakgatla case study provides a different perspective on the challenges faced by land-owning communities when attempting to corporatise and commercialise mining opportunities. This concept of "group entrepreneurship" is crucial for understanding successful partnerships in natural resource exploitation.

Similar to the Bafokeng, the Bakgatla community acquired platinum-rich land in the mid-1800s. However, the Bakgatla only began receiving royalties for mining on their land in 1982 (Capps & Mswana, 2015). After the end of apartheid, the Bakgatla challenged Anglo American Platinum (Amplats) over historical royalty payments for mining on their land (Amplats, 2018). This eventually led to an improved royalty agreement between Amplats and the Bakgatla for the Union mine, which had been Amplats' third-most profitable operation for decades.

Table 26 – The Bakgatla ba Kgafela registered businesses

Company	Year of registration	Operating Status as at 2022	Industry	Notable Crossholdings
Bakgatla Ba Kgafela Investments and Resources	2007	Active	Service Activities Incidental to Mining	
Bakgatla Ba Kgafela Investment Holdings	2013	Active	Financial intermediation	Sibanye Rustenburg Platinum Mines (26%)
Siyanda Bakgatla Platinum Mine	2016	Active	Mining of Platinum Group Metals	Siyanda Resources (Pty) Ltd
Bakgatla-Ba-Kgafela Tribe			Trust	Siyanda Bakgatla Platinum Mine, Sedibelo Platinum Mines Ltd

Source: Who own who database.

While the Bafokeng's success serves as an example of what's achievable through organised efforts, the leadership of chief Nyalala Pilane of the Bakgatla community took a different approach. In contrast to the Bafokeng leadership, which prioritised community development, Pilane used his position for personal gain. Becoming chief in 1996, he benefited from a law enacted in 2004 that gave traditional chiefs power over communal land and resources (Mnwana, 2018). Pilane exploited ANC connections and relationships with major commercial players to exchange mining rights for personal royalties. Although the Bakgatla seemingly adopted the Bafokeng model by registering companies for BEE deals, Pilane's corruption and mismanagement of funds hindered the community's ability to unite and turn their platinum-rich land into a successful mining company or a productive trust for local development (Mnwana, 2014).

The leadership of the Bakgatla community has been marred by allegations of misappropriation of mining revenues and underhanded deals, notably involving Pallinghurst (Bloom & Wales-Smith, 2018; Mnwana, 2018; Wales-Smith, 2019). The Bakgatla leadership's involvement with Pallinghurst has been criticised in scholarly articles and media as a scandalous arrangement (Mnwana, 2014). Cases involving Pilane and collusive deals have been examined by the Baloyi Commission (Claassens, 2019; Wicomb, 2019), and a constitutional court case highlighted inadequate consultation with landowners regarding mining rights (Louw & Chris Stevens, 2018). Despite similar histories and opportunities, the leadership orientation has determined the degree to which these communities could convert opportunities into collective benefits.

Table 27 – INSTRUMENT 1: The Bafokeng and the Bakgatla leadership score on the capital spectrum

Attributes	Company types				Bafokeng leader score (5)	Bakgatla leader score (6)
	Patient/Producer company (<i>farsighted</i>)* (1)	Investment-holding company (2)	Opportunistic (3)	Predatory (4)		
<i>Incentives or behaviour</i>						
Focus is on fixed investment, production, and skills	+++	++	+	0	3	1
Patient capital invests in exploration and mine development	+++	++	+	0	3	0
Patient capital creates a pipeline of fixed investment projects	+++	++	+	0	1	0
Patient capital seeks for patient JV partners	+++	++	+	0	3	1
Patient capital seeks long-term production-based deals with partners	+++	++	+	0	3	1
Patient capital deploys its own balance sheet capital to domestic investment	+++	++	+	0	3	0
Patient capital, or its corporate strategy, sits above political factions	+++	++	+	0	3	1
Majority of revenue comes from sales of produced goods and services	+++	++	+	0	2	1
Maximum score	24	16	8	0	21	5

Table 27 positions the post-apartheid leadership of the Bafokeng and the Bakgatla along the capital spectrum. Notably, the Bafokeng leadership exhibited a strong commitment to establishing a unified and harmonious community. Utilising proceeds from mining, the Bafokeng Nation not only developed an investment portfolio of substantial assets, but also established an independent operating platinum mine. This is a clear manifestation of patient capital attributes. Consequently, the Bafokeng leadership earns a commendable score of 21 out of 24 points. However, this assessment will face scrutiny in the subsequent chapter, where we will delve into the quality of the Bafokeng's agreement with Amplats.

On the contrary, the Bakgatla leadership attains a mere 5 out of 24 points, locating it at the opportunistic extremity of the spectrum. This leadership notably embraced an extractive accumulation approach, diverting resources away from community betterment and developmental initiatives in favour of personal gain. This starkly exemplifies a predatory leadership disposition, prone to engaging in collusive, rent-seeking arrangements.

9.7. Conclusion: Placing the Bafokeng and Bakgatla leaderships on the capital spectrum

In conclusion, the Bakgatla-ba-Kgafela community represents a case of a mining land-owning community that gained wealth and power through ancestral claims. By exchanging mining rights for royalties and equity, they accumulated substantial wealth that could have been used for community development. However, unlike the Bafokeng, the Bakgatla faced predatory leadership, preventing them from realising the full potential of their ancestral lands.

What do the deals between traditional authorities and I-firms look like in practice, and how do they lead to investment and transformation outcomes? This is explored in the next chapter.

CHAPTER 10 Amplats' community deals, subsequent investments, and transformation

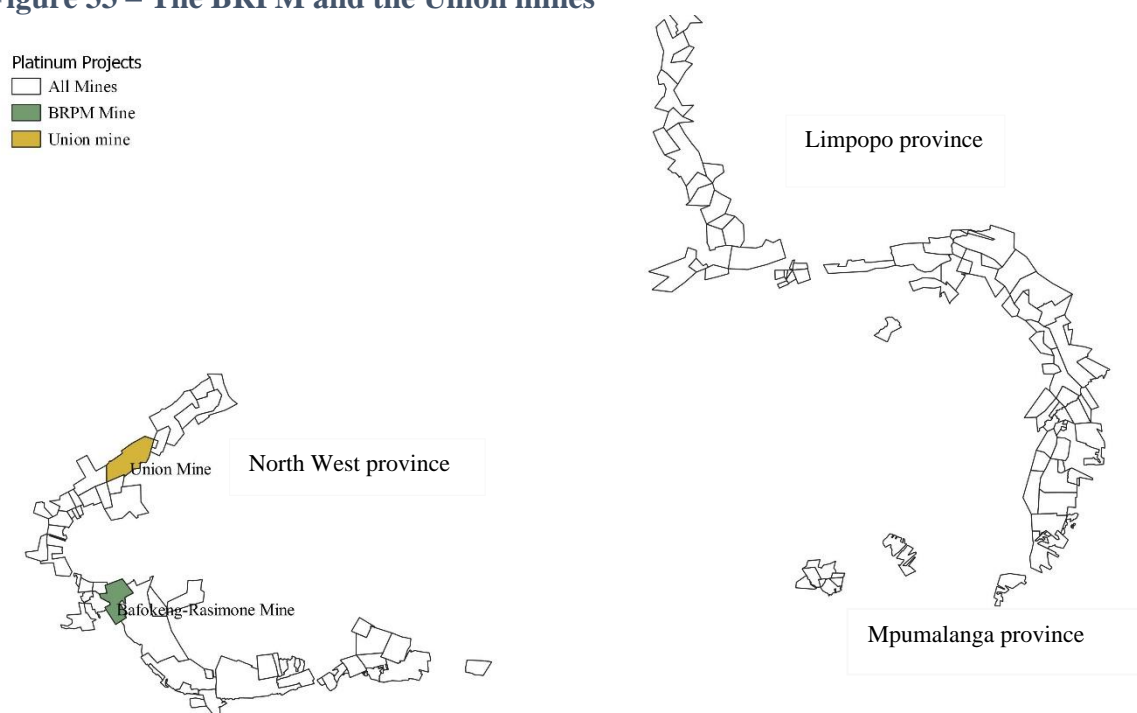
10.1. Introduction

How did the “deal as credible commitment” play out with communities in ways that supported certainty and investment, especially given the contentious and capricious politics in mining communities? Chapter 9 has already suggested that the role of traditional leaders is a key ingredient to the success of deals. This chapters aims to examine the individual deals between Amplats and the communities using a comparative lens. Its answer to this question offers further insights into the variation of deals and partners in the BEE deals space.

10.2. Summary of asset level deals and investment outcomes

This section provides a brief summary of the mines over which Amplats and the communities have established joint ventures. The Royal Bafokeng jointly built and operated the BRPM mine, shown in Figure 33. The Bakgatla, added much later to a mine-level deal, own shares in the Union mine, also shown below.

Figure 33 – The BRPM and the Union mines



Source: Author, using QGIS software. Data from (Zientek et al., 2014).

Table 28 succinctly presents the outcomes of Amplats' community-asset level deals in terms of investment and transformation. Both deals exemplify success, though with varying degrees. The Royal Bafokeng deal stands as a prime example of patient traditional leadership, effectively collaborating with Amplats while enlisting capable individuals to manage the mining operations for the Bafokeng community. In stark contrast, the Bakgatla community lacks such patient leadership. Consequently, they did not transition into becoming joint operating partners with Amplats, instead remaining as passive minority shareholders. Reports indicate that the benefits of these deals have not trickled down to the community members due to this leadership dynamic. Despite these internal divisions, the Union mine stands as a shining example of successful subsequent investment.

Table 28 – Summary of Amplats’ joint venture assets with communities and investment outcomes

Year of deal	Asset	Black Partner	Details of plans	Outcome in 2018
2001	Royal Bafokeng Rasimone mine and Styldrift	Royal Bafokeng community	Amplats and the Bafokeng were joint operating partners at the Bafokeng mine, which also included the Styldrift project.	First Tier Successful investment with stable deal and transformation
2006	Union Mine, Rooderand, Magazynskraal	Bakgatla ba Kgafela community	The deal was mainly a minority shareholding by the Bakgatla at Union mine. The community could not convert two other deals with Amplats into investments.	Second Tier in respect to Union mine. Fourth Tier in respect to Rooderand and Magazynskraal.

Source: Compiled by author.

This dichotomy underscores the critical role of leadership in determining the outcome of these deals. The patient and effective traditional leadership of the Royal Bafokeng deal facilitated a fruitful partnership, resulting in substantial investment and transformation. Conversely, the absence of similar leadership in the Bakgatla deal hindered their progression beyond passive ownership, despite the notable success of the Union mine in terms of further investment.

The following sections trace the individual deals.

Asset level deals

10.3. The Royal Bafokeng BRP mine platinum deal

The deal concerns the Bafokeng Rasimone Platinum Mine (BRPM), and Styldrift mine, in North West

Tracing the BRP mine deal

1997	1999	2001	2002	2004	2006	2007	2008	2010	2011	2018
Amplats commences BPRM mine	Amplats announces negotiations with RBN to develop Styldrift	Amplats announces JV to develop Styldrift for R2.2 billion	Amplats and the Bafokeng extend JV to include the BPRM mine	Amplats and Bafokeng deal becomes unconditional, and the Bafokeng co-run the mines	Converts royalty to equity stake with Implats (13.4%)	Bafokeng assets worth R33.5 billion post deals	Royal Bafokeng assumes control of BPRM and Styldrift	Royal Bafokeng lists RBP on the JSE	The Bafokeng further diversify away from mining	Amplats sells RBP mines to the Bafokeng
1997	1999	2001	2002	2004	2006	2007	2008	2010	2011	2018

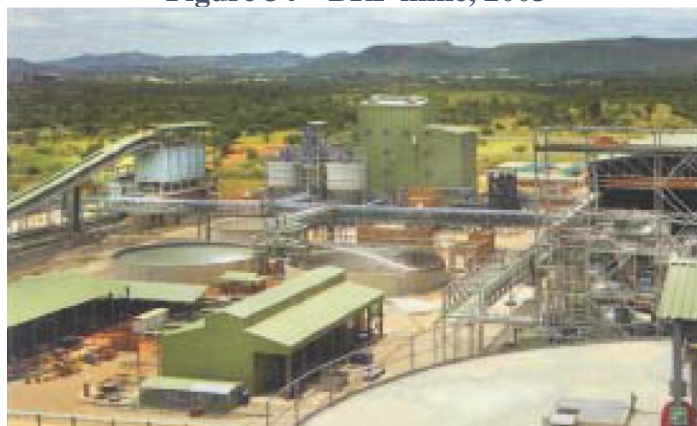
Sources: Amplats annual reports

Pre-deal period (1997-2003): Early investment success

In 1997, Amplats unveiled plans for a new mine in Bafokeng territory, allocating an initial capital expenditure of R900 million in 1997 currency terms. Named the BRP mine, production was anticipated to commence in 2000, reaching full capacity by 2002. An investment exceeding R700 million was injected in 1999, with a focus on constructing a concentrator. By 2000, substantial strides were made in mine development, prompting a revision of estimated capital outlay to R1.2 billion, accompanied by a workforce of 2800 individuals. In 2001, Amplats announced a groundbreaking 50/50 joint venture with the Royal Bafokeng to establish the Styldrift project adjacent to the BRP mine. The involved partners jointly owned land in the vicinity. The projected timeline was five years, involving a cost of R2.662 billion in 2001 currency terms. This venture followed in-depth negotiations following Royal Bafokeng's legal victories against Implats.

In 2002, the BRP mine began producing, adding R433.9 million to Amplats' operating profits (See Figure 34 below). In 2003, substantial capital expenditure continued to be sunk, all invested in mine expansion. Amplats announced it would declare the BRP mine a steady state mine in 2004. In the same year (2003), Amplats announced that the initial deal on Styldrift with the Bafokeng would convert into a collective deal including the BRP mine, on a 50/50 joint venture deal.

Figure 34 – BRP mine, 2003



Source: Amplats annual report 2003

Firm deal period (2004 – 2018): Implementation and expansion

The Bafokeng-Amplats joint venture officially commenced operations in March 2004, with Amplats ceding 50 per cent of the BRP mine to the Bafokeng in exchange for specific mineral rights. Simultaneously, the BRP mine achieved a steady operational state. Between 2004 and 2006, both Amplats and the Royal Bafokeng escalated their investments, focusing on expanding the BRP mine and the Styldrift project. This period of heightened investment coincided with a considerable surge in production at the mining complex. Notably, in 2006, Phase 2 of the mine expansion was pursued, aiming for completion by 2011. Concurrently, the feasibility study for the Styldrift project was initiated in 2006, with a mining rights application submitted for ministerial approval during Q3 2007, paving the way for project execution in early 2008.

Key Projects and Restructuring

Table 29 outlines pivotal projects at the Royal Bafokeng mine spanning 2005 to 2012. Notably, the BRP mine expansion project, the Styldrift 1 expansion project, and the North Shaft Phase 3 were among the significant endeavours undertaken.

Table 29 – Key projects at the Royal Bafokeng mine between 2005 and 2012

Announced date	Project name	Announced value (R million)	Estimated completion date	Project Status
Aug-05	BPRM Expansion Project	1,200	Dec-09	Complete
Oct-08	Styldrift 1 expansion project	7,500	Mar-19	Complete
Jun-11	North shaft chairlift	110	Mar-15	Complete
Jun-12	Bafokeng Rasimone North Shaft Phase 3	11,010	Aug-17	Underway as at 2017

Source: Nedbank (2017)

In October 2008, a pivotal restructuring was agreed upon between Amplats and Royal Bafokeng Holdings (RBH), the investment arm of the Royal Bafokeng. This restructuring led to Bafokeng assuming control of the BRP mine. A new entity, RBP, emerged, holding a 67 per cent stake in the joint venture. 2007 witnessed a further surge in investment by the partnership, with Amplats attributing this to funding the expansion of BRP mine Phase 2 and the Styldrift project. The latter project concluded feasibility studies, requiring an initial capital of around R10.3 billion (Amplats, 2008a).

Transition to Independence

The restructuring of the BRP joint venture concluded in December 2009, facilitating the Royal Bafokeng's listing on the JSE, enabling them to assume full control over mining operations. In November 2010, RBP was successfully listed on the JSE, marking the Royal Bafokeng as the pioneering platinum mining community with a listed, producing company.

Amidst these developments, work on the Styldrift project commenced in March 2009, aimed for completion by 2017. Notably, in 2010, the Styldrift vertical shaft was successfully established. The joint venture greenlit Phase 3 of the BRP mine project in the same year, entailing deepening the mine and extending its lifespan by 8 years.

Resilience in Challenging Times

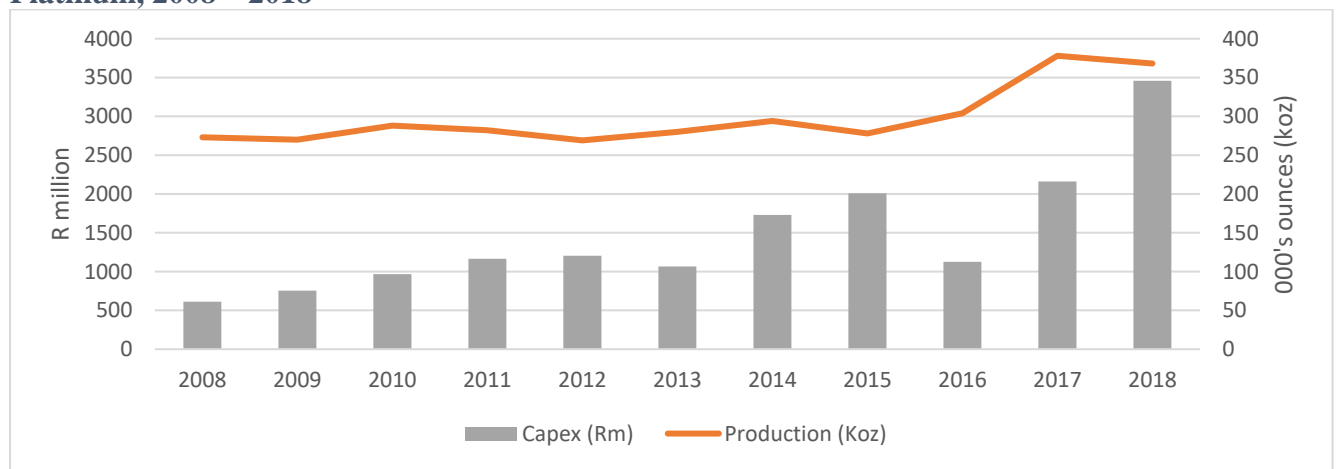
During 2011-2015, the joint venture successfully concluded both Phase 2 and Phase 3 of the BRP mine, achieving significant milestones in the Styldrift project. This period coincided with turbulent platinum protests; nevertheless, the BRP mine managed to secure wage settlements with unions, sustaining project momentum.

Full Independence

July 2018 marked another pivotal point when Amplats accepted Royal Bafokeng's offer to acquire its 33 per cent stake in the BRP mine. This transaction was completed in November 2018, signifying the Royal Bafokeng's complete autonomy as an independent company.

Conclusion – Evaluation in line with the hypothesis

Figure 35 – The production and capital investment trends in the Royal Bafokeng Platinum, 2008 – 2018



Source: RBP annual reports, 2008-2018

Figure 35 offers insight into the production and capital investment trends in Royal Bafokeng Platinum from 2008 to 2018.

Table 30 – The capital investment performance of the Amplats-Bafokeng deal

Asset	Intended/announced investment (+year)	Actual investment 1994-2001	Actual Investment 2002-2007	Royal Bafokeng becomes independent producer	Actual Investment 2008-2014	Actual Investment 2015-2018	Total	
BPRM	1996. Initial 1.2 billion	R1.46 billion	R1.283 (Amplats portion)		Phase 2 expansion of BPRM begins (Amplats, 2007).	R5.295 billion (Amplats portion)	R8.335 billion (RBP portion)	Positive, healthy subsequent investment even in real money terms. Amplats' share amounted to R8 billion between 1997 and 2018.
Styldrift	2001. R2.243 billion initial. 2008. R7.6 billion in 2008 money terms in order to reach steady state. Steady state in 2015 (Amplats, 2008b). Completion revised to 2019.	n/a	R2.7 billion (as intended, initial project completed)		R6.608 billion (Amplats portion) Plus R6.772 billion (RBP portion)			
Tier	First Tier investment, transformative							

Source: Amplats annual reports and RBP annual reports

Table 30 further illustrates the production and capital investment performance. Notably, RBP maintained consistent full-capacity performance and even increased its output after assuming full control. The table highlights capital investments, with the Bafokeng's share steadily growing over the years. This underscores a positive and substantial subsequent investment buoyed by a strong partnership. Royal Bafokeng Platinum's trajectory aligns with the hypothesis, depicting multiple rounds of investment and a flourishing, transformative Black Economic Empowerment enterprise, much like Motsepe's African Rainbow Minerals.

10.4. The Bakgatla-Ba-Kgafela Union platinum deal

1. *Pre-deal Union mine (1995-2005)*

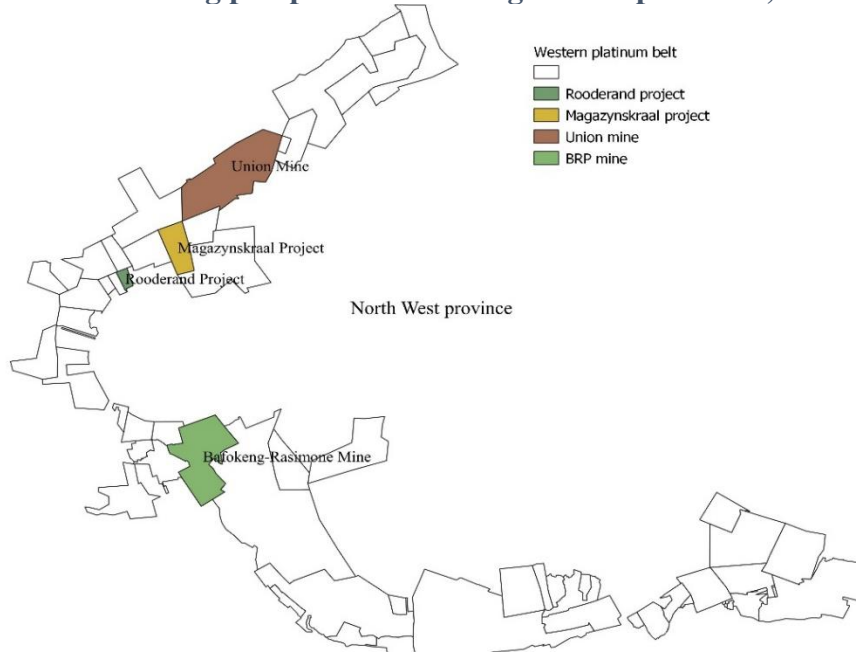
By the time Amplats was formed in 1995, the Union mine was a well-established part of the company's portfolio. The changes brought by the court processes documented in Chapter 9 between the Bakgatla and Amplats did not deter Amplats' investment appetite for the Union mine. The risk of expropriation was not a major concern as the Union mine fell under two deals during the period, safeguarding Amplats' ownership. The first deal emerged as a settlement from the court process, defining the royalty rate Amplats would pay the Bakgatla for mining on their land. The second deal was a corporate-political agreement with the DMR, offering Amplats protection and allowing certain mines, including the Union mine, to remain under 100 per cent ownership. During this period, Amplats reported consistent annual investments in the Union mine, with substantial funding directed towards expansion, totalling approximately R2 billion.

As mentioned before, in July 2006 the DMR and Amplats undertook a joint review of Amplats' progress towards BEE ownership targets. It appears that of the gaps identified, Amplats saw an opportunity to explore a more concrete deal with the Bakgatla on the Union mine towards the conversion of Amplats' old order rights. The next section traces this deal.

2. *Deal period: 2006-2018*

Following a joint review with the DMR in 2006, Amplats intensified its BEE profile by involving the Bakgatla in the Union mine deal, transferring 15 per cent ownership to them in December 2006 (Amplats, 2006). In return, Amplats converted its royalty agreement with the Bakgatla. The Bakgatla were essentially passive shareholders in this deal. Amplats extended greenfield opportunities to the Bakgatla, involving two prospecting properties: Rooderand and Magazynskraal. Amplats disposed of a 55 per cent interest in the mineral rights of Rooderand, while the Magazynskraal property became an exploration joint venture with the Bakgatla (Amplats, 2006).

Figure 36 – The mining prospects of the Bakgatla-Amplats deal, 2006

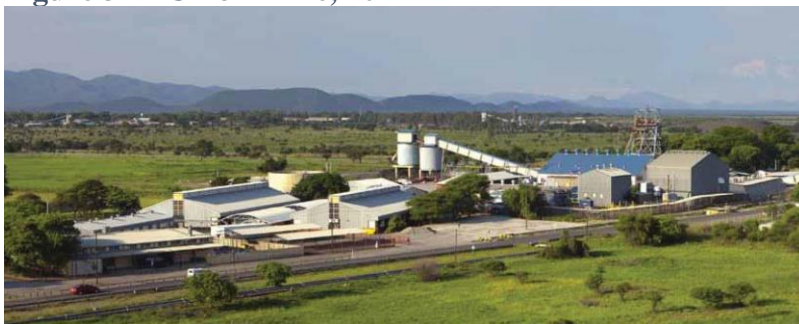


Source: Author, using QGIS software. Data from (Zientek et al., 2014).

On the Magazynskraal property, Amplats and the Bakgatla entered into an exploration joint venture, with the Bakgatla taking an initial of 26 per cent. The agreement was that the Bakgatla (potentially with a suitably qualified partner) would procure funding for and completion of the necessary exploration and feasibility work in relation to developing the property. If the Bakgatla managed to conclude the feasibility work, the agreement was that they would have a majority stake in the asset. The comprehensive deal was accepted by the DMR, which helped with the conversion of 18 of Amplats' prospecting rights.

Between 2006 and 2011, Amplats continued significant investments in the Union mine, replacing declines and sinking new shafts as part of an expansion program (see Figure 37). In 2011, the Union Mine was successfully restructured into Union North and Union South mines, creating two mines under the Bakgatla joint venture. However, the Bakgatla made little progress in exploring the Rooderand and Magazynskraal prospects.

Figure 37 – Union Mine, 2011



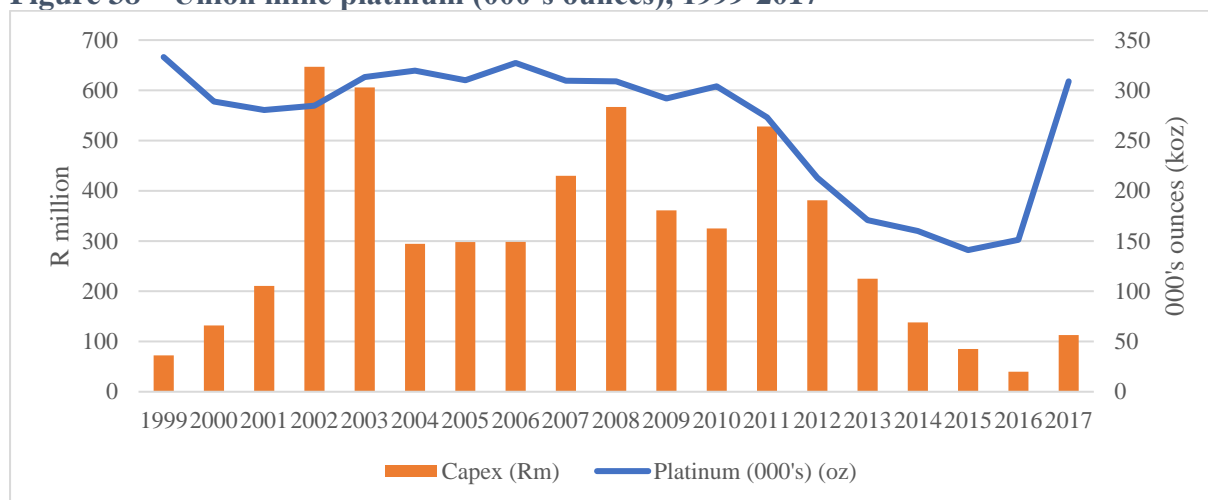
Source: Amplats annual report 2011

Between 2011 and 2015, Amplats escalated capital expenditure to fund "Phase 4" of the Union mine expansion and improve its overall operation. However, in 2016, due to declining platinum prices, Amplats announced a restructuring plan involving the sale of some assets, including the Union mine, which led to the cessation of expansion capital on the Union mine.

Conclusion: Evaluation in light of the hypothesis

The Bakgatla-Amplats deal adds value to the study in two significant ways. First, it highlights the challenges of establishing and sustaining BEE deals involving communities on the "Bafokeng model," which generates an independently owned enterprise. Such challenges often arise from community contentions and leadership issues. Thus, turning royalty deals into active joint ventures proves challenging. Second, not all asset-level deals need to be as robust as the best deals for an I-firm to invest. The Union mine's case is within Amplats' suite of robust deals, allowing substantial investments even when the partnership follows a patient and opportunistic combination. The Bakgatla case, though not as successful as the Bafokeng case, exemplifies the complexities surrounding community-involved BEE deals.

Figure 38 – Union mine platinum (000’s ounces), 1999-2017



Source: Amplats annual reports, 1999-2017

Table 31 – Intended versus actual capital investment expenditure on the Union mine

Asset	Intended/announced investment (+year)	Actual Investment 2001-2007	Actual Investment 2008-2014	Actual Investment 2015-2018	Total
Union mine	The deal transferred an already existing mine. The test is whether Amplats continued substantial investment into the asset post the deal	R2,783.7 million	R2,525 million	R238 million	Large subsequent investment until 2014. Amplats invested c.R5,546.7 million between 2001 and 2018
Tier	Second Tier investment				

Figure 38 shows the overall trend of the capital investment and production of the Union mine between 1999 and 2017. Amplats maintained modest subsequent investment in the Union mine, which supported the productivity of the mine. Table 31 groups the chunks of subsequent investment into three periods between 2001 and 2018. This shows a relatively healthy subsequent investment performance – at least until 2014.

Overall, the Bakgatla-Amplats deal aligns with Second Tier investment, marked by moderate subsequent investment and transformation complexities due to community dynamics. It serves as a valuable comparative case in the exploration of community-involved BEE deals.

10.5. Conclusion

This chapter underscores the significance of community-involved agreements as broad-based BEE partners. This aspect stands out as a crucial and distinctive element within the broader narrative of BEE in South Africa's platinum belt. Through the examination of a case study within the I-patient context, it has been revealed that partnerships with land-owning communities can indeed flourish, both in terms of investment and transformative impact. This hypothesis has remained central throughout the investigation and interpretation of these specific instances. Further elaboration on the role of communities in the BEE narrative will be provided in Chapters 11 and 14, delving into the details of their involvement and contributions.

SECTION E – Discussing the findings so far

CHAPTER 11 From BEE rules to “productive transformation”

Introduction

This chapter is structured around three key findings at the firm/deal level and two significant findings at the country/sectoral level within the context of the BEE transformation, noting that having only two case studies is a key limitation.¹⁰³ The first finding underscores the crucial role of "good deals" in driving investment. Such deals emerge when patient incumbent capital collaborates with patient BEE capital. The second finding highlights the significance of the rule of law while recognising that cooperative deals centred on productivity, rather than an overabundance of rules, can effectively address residual uncertainty. Third, good deals get the law, the economics, and the politics right. At the broader country and sectoral level, the discussion centres on two vital discoveries: firstly, the supremacy of a cooperative ethos over an obsession with rules, and secondly, the efficacy of combining transformation with productivity, referred to as "productive transformation," as a superior developmental strategy.

11.1. Firm/deal level findings and discussion

11.1.1. “Patient capital” and “good deals” are responsible for a large share of capital investment in platinum

Section A argued *why* investment matters. The case studies in Sections B to D showed *how* investment happens and how failures in investment happen. Investment was an undertaking of productively inclined firms:

- a) Amplats, acting as a patient incumbent firm, defies the notion that South Africa missed out on the mining boom by committing substantial fixed investments to mines. Despite encountering some unsuccessful deals, Amplats exemplifies productive engagement with political power, fostering successful partnerships with BEE counterparts.¹⁰⁴ In contrast, Lonmin's short-term strategy prioritised extraction over investment-driven

¹⁰³ Limitation of case studies raises some questions on the strength of the evidence on the matching hypothesis and how matching might unfold in different, hypothetical, circumstances with a wider field of I firms and a wider spread of potential E-firm partners across the patient-opportunistic spectrum.

¹⁰⁴ Simply because there is a high-quality ore body does not mean investment will follow. Investment depends on credible commitment/expectations of the future. The case of Lonmin, with excellent ore bodies, demonstrates this point.

corporate growth. Although it served as a strategy for managing expropriation risk, it proved intrinsically vulnerable.

Table 32 – Consolidated capital expenditure of Amplats, Lonmin, and BEE deals, 1994-2018

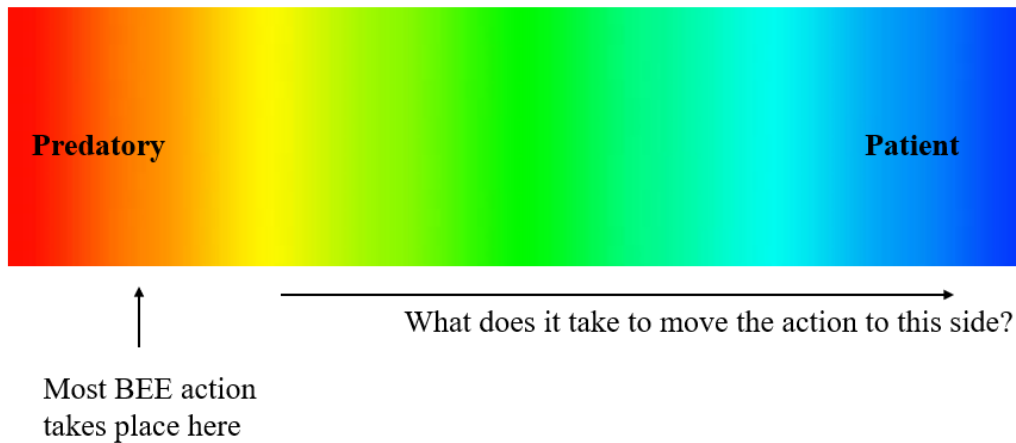
	1994-2000 (Rm)	2001-2007 (Rm)	2008-2014 (Rm)	2015-2018 (Rm)	Total incumbent investment (Rm)
<i>Patient capital: Amplats (100% owned assets)</i>	9,304.2	43,427.3	61,492	20,802	135,025.5
<i>Amplats + ARM, RBP, Xstrata, Aquarius</i>	n/a	3,877.6	2,839	4,349	11,065.6
<i>Opportunistic capital: Lonmin (100% owned assets)</i>	10,563.2	10,245.3	15,649.13	5,344.1	41,801.73
<i>Lonmin + Incwala, Shanduka, Boynton; Pelawan, Khumama, Mvelaphanda, Bakgatla ba Kgafela</i>	n/a	4,598.58	4,869	R304	9,771.58
Total investment	19,867.4	62,148.78	84,849.13	30,799.1	197,664.41

Source Author. Note: These figures are taken from the asset level case studies in the PhD.

Table 32 presented above, aggregates the capital investments outlined in the case studies. The table highlights two significant observations. Firstly, patient capital, which encompasses BEE-related initiatives, emerges as a major driver of capital investment within the mining sector during the study's 25-year timeframe. Secondly, even when factoring in the opportunistic BEE transactions, the bulk of investment is orchestrated by Amplats, particularly in collaboration with Pelawan, Mvelaphanda, Khumama, and the Bakgatla ba Kgafela community. (It is important to acknowledge that the table's scope is limited as it does not account for absolute size disparities between Amplats and Lonmin. The subsequent discussion will delve into more thorough comparisons that factor in these size differences.).

- b) The orientation of the firm holds great significance. For farsighted I-firms, the paramount challenge is to forge deals that withstand the test of time – deals that are resilient enough to ensure steadfast and adequately influential partnerships, irrespective of the ebb and flow of individuals within the ruling political party. According to the hypothesis, the potency of patient E-partners lies in their ability to maintain considerable influence while preserving a certain degree of "independence" from political dynamics, thus enabling them to offer sustained and trustworthy commitment over the long run. The ultimate outcome becomes favourable when all involved partners demonstrate the characteristics of "patient capital," underpinning the establishment of mutually beneficial agreements.

Figure 39 – The capital spectrum



Source: Author. Note that this is a summarising representation of the capital spectrum presented in Chapter 2.

Figure 39 shows an alternative way of representing the capital spectrum.

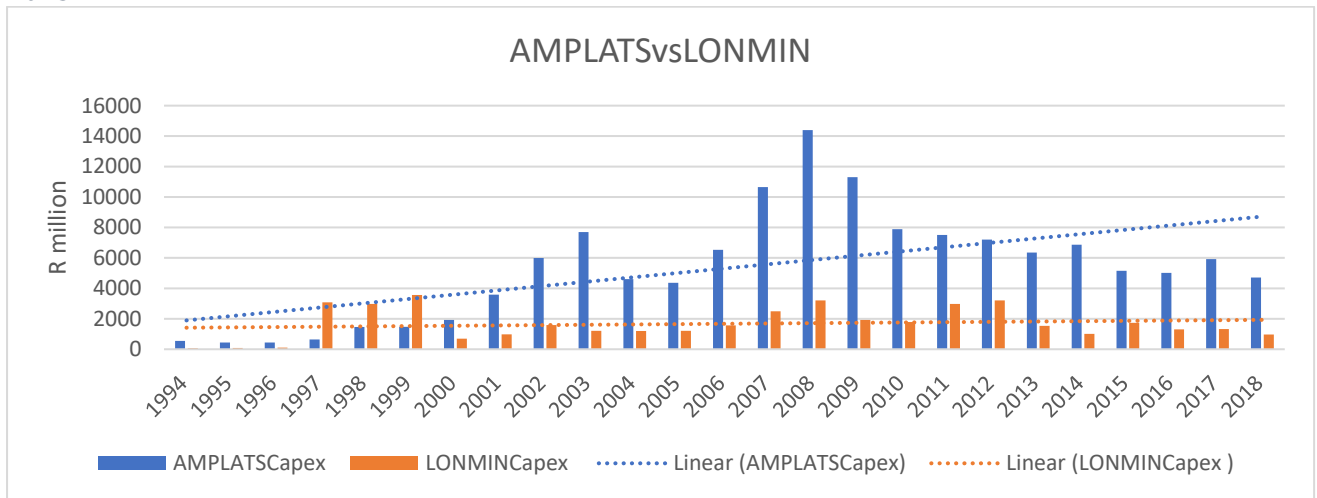
A side-by-side analysis of Amplats and Lonmin serves to underscore the consequences of predatory corporate strategies, vividly illustrated by Lonmin's downfall. These corporate strategies often masquerade as developmental or transformative initiatives, orchestrating collusive agreements with predatory state actors, thereby sidestepping genuine accountability and scrutiny. In contrast, patient corporate strategies are deeply rooted in a vision that prioritises developmental objectives within the nation's political economy. Such strategies collaborate harmoniously with political advocates of this vision. Notably, this approach not only enables firms to internalise the dynamics of developmental political economy but also encourages proactive involvement in fostering a positive corporate citizenship. The conduct of Anglo serves as a prime illustration of this corporate approach, demonstrated through its responses to unionisation during the 1980s, its engagement with BEE in the 1990s, and its actions when confronted with legal disputes from local communities.¹⁰⁵

11.1.2. Comparative capital expenditure trends, Amplats and Lonmin

Since Amplats was the biggest platinum producer between 1994 and 2018, it would not be surprising to observe (as Figure 40 shows) larger year-on-year investments by the company, relative to the third biggest producer, Lonmin. What is also evident in the figure, however, is that Amplats has a largely upward trajectory of nominal fixed investment, while Lonmin does not.

¹⁰⁵ Anglo is by no means an impeccably virtuous corporation. It operates in manners that contribute to the propagation of crony capitalism, yielding adverse outcomes (Nxele, 2022). The present empirical investigation delves into a broad spectrum of behaviours. When situating a concept on a spectrum, a pivotal query emerges: "To what extent or to what degree...?" The response takes form through an evaluative or conditional phrase, such as: "The firm's nature leans toward patience or predation to the extent that..."

Figure 40 – AMPLATS & LONMIN absolute annual fixed investment* (nominal), 1994-2018

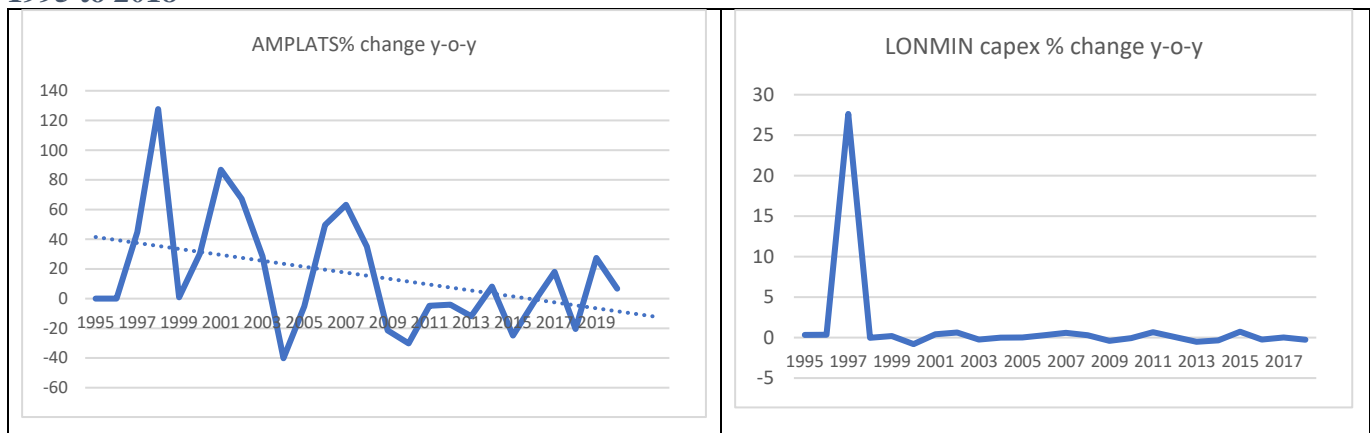


Source: Company annual reports

*Note: Fixed investment is defined as capital expenditure on mining assets, mining projects for expansion and for renewals and replacements

An alternative way to present the investment performance of the two companies is year-on-year annual changes in fixed investment.

Figure 41 – Amplats and Lonmin: Percentage change in fixed investment, year on year, 1995 to 2018



Source: Company annual reports

Figure 41 above shows the rate of change of investment over time. Notably, Amplats consistently demonstrated a net positive fixed investment even amid the uncertainties of the 2000s. Of significance is the discernible trend of Amplats committing substantial subsequent investments. Contrarily, this pattern did not hold true for Lonmin, even when adjusting for absolute disparities in investment size. As posited by the hypothesis, opportunistic capital may

indeed contribute substantial initial investment, yet subsequent investment tends to be curtailed due to the inherent opportunism and instability linked to such deals.¹⁰⁶

Looking ahead of the 2018 timeline, Amplats made a significant announcement by elevating its total investment pledge in the country to R100 billion until 2025. Notably, this increment of R15 billion surpasses its prior commitment, signifying the company's intensified commitment to sustaining and expanding its operations within South Africa. Additionally, this augmented commitment also encompasses the integration of green technologies into its initiatives. An illustrative instance of this forward-looking approach involves the development of a hydrogen-powered fuel cell mine haul truck at the Mogalakwena mine (Hall, 2021). This strategic move underscores Amplats' engagement with innovative and environmentally sustainable solutions as part of its ongoing investment endeavours.

11.1.3. Rule of law matters, and institutions matter, but even in relatively developed countries, there is residual uncertainty that gives scope for strategic interaction

How far can relatively strong impersonal institutions/bureaucracy take us? North (1990) identified that a set of rules of the game provided by institutions still leaves considerable scope for strategic interaction between agents. This doctoral study contends that this strategic interaction, particularly in the context of elite class transformation within the mining sector, revolves around essential deals between economic and political leaders. These deals adopt a strategic approach in managing the lingering risk of expropriation that persists due to the uncertainties stemming from "incomplete contracts."

The legal framework of BEE, based on rules, was designed to steer firms toward transformative behaviour. However, these rules proved insufficient in curbing the predatory behaviours exhibited by elites, politicians, and other influential entities. This inherent uncertainty in the BEE program is a focal point of this research. Paradoxically, BEE, intended to be an institutional framework, fell short of achieving its objectives. Instead of establishing a dependable and foreseeable landscape, it inadvertently became a catalyst for conflict and

¹⁰⁶ Analysing Lonmin's annual capital expenditures in relation to its annual operating profit, it becomes evident that the company allocated only marginal portions of its profits towards reinvesting in production throughout the entirety of the 2000s. Despite concerted efforts to bolster investments subsequent to the Marikana tragedy (referenced in Chapter 7 and 8), these initiatives failed to resuscitate the company's fortunes. In stark contrast, Amplats followed a trajectory of steadily increasing its profit reinvestment rate on average, a trend that harmonised with its expansion strategy from 2000 to 2014. However, this upward momentum was dampened by the decline in commodity prices post-2014.

unpredictability within the economy. This notable uncertainty wielded enough influence to impede the progress of capital investment formation, essentially entrapping the country within a cycle of low investment.

A potential avenue for mitigating this uncertainty, albeit partially, emerges in the form of infusing credible commitment into the BEE process.

11.1.4. Good deals get the law, the economics, and the politics right

This study highlights the pivotal role of "good deals" that effectively align legal, economic, and political aspects. Such deals transcend the realm of factional disputes within the ruling party. Instead of being entangled in the conflicts of specific factions, patient capital strategises by forming corporate-level agreements that demonstrate alignment with the objectives of the ruling party. As exemplified by Amplats, this approach shields firms from the uncertainties of competing interests and the escalating fragmentation observed within the African National Congress (ANC) and organised black business circles.

Drawing lessons from the earlier experiences of Anglo, Amplats adopted a strategy at the asset level that involved engaging partners who skilfully navigated the landscape to avoid being embroiled in political factions. Crafting collaborative joint ventures allowed the interests of black partners to harmonise with those of Amplats. The operational contributions of BEE partners showcased the cumulative operational competence of entities like Royal Bafokeng Platinum and African Rainbow Minerals, which evolved into independent producers that continue to thrive.

The patient-type asset level deals presented in the study offer insights that may address the long-standing debate of "once empowered, always empowered," as discussed in Chapter 1. This debate primarily revolves around established firms seeking assurance that fulfilling BEE ownership targets would exempt them from "re-empowering" their companies in the event of BEE partners selling their stakes. The case of productive asset level deals suggests that the implications of this debate have been exaggerated or misconstrued. In instances where legal ambiguity exists, forging deals with committed BEE capital partners proves advantageous for major capital players seeking to minimise risks. Such deals, characterised by specific features, include:

- i. Long-termism: Operational level ownership and involvement create a natural lock-in, akin to being "empowered for life." In practice, these deals align with the spirit

of "once empowered, always empowered" as they curtail the incentive and likelihood of BEE partners cashing out.

- ii. Tangible BEE vehicle: Beneficiaries evolve into legitimate independent businesses, capable of raising capital for investment and growth. Establishing black operational mining companies grants "BEE entrepreneurs" access to reserves, technical expertise, smelting and refining capacity, and safeguards against shareholder dilution.
- iii. Path to building new industrialists: These deals offer a pathway to fostering new industrial capabilities, rather than merely creating new tradable claims within the existing economic landscape.
- iv. Credible commitment: Asset level deals embody pockets of credible commitment, supported by the relatively robust rule of law.

The study postulates that if "once empowered, always empowered" were enshrined in law, the incentive for major capital entities to engage in deals aligned with the aforementioned features would diminish. This alternative emphasises weaker forms of deals, characteristic of the failures observed within the BEE framework. Such deals encompass features like "fronting," highly leveraged arrangements, and equity-based agreements that may incite market timing behaviours, leading to fragile outcomes.

Hence, the study underscores the lessons drawn from over two decades of BEE deals, particularly emphasising the types of deals that pave the way for developmental progress. At the deal level, partnerships involving patient firms, both the incumbent and BEE partners, serve as a foundation for harmonising elite transformation and capital investment accumulation.

11.2. Country and sector level implications: The ethos of productivity and the role of deals as a cooperative mechanism in facilitating investment

11.2.1. The ethos of cooperation

In the pursuit of profitability and long-term success, the foundational principle driving the patient capital approach to deals was cooperation and productivity. These cooperative deals were formulated in an environment marked by disproportionate adherence to rigid rules and a failure to foster stronger collaboration among elite groups focused on development. The adoption of proactive, productivity-oriented, and flexible rules/deals initiatives was limited,

leaving a void where adaptability and champions were lacking. Consequently, this left the system more susceptible to significant political shifts (such as state capture). Over time, the emphasis on conforming to rules led to the creation of superficial structures— "isomorphic mimicry"—and an exaggerated belief in the transformative power of a celebratory "good governance" narrative.

Good deals fostered by patient capital emerged in an environment that did not readily accommodate them. The broader business establishment in South Africa displayed little interest in championing economic transformation. Instead, the focus of large-scale businesses leaned towards unrestricted capital flows and offshore investments, neglecting proactive measures to enhance productivity. Notably, the prevailing economic discourse, upheld by the established business community and its affiliates within the media, academia, and policy circles, was narrowly centred around improving the business climate to stimulate growth. Amidst this discourse, the collaboration between capital and political elites increasingly revolved around individual deals that favoured a select few, rather than being a nationwide reality capable of benefiting the masses.

The question now becomes: how can these lessons at the deal level inform the development of a cooperative ethos at both the sector and national levels? The insights from these case studies can guide us in understanding what should be avoided:

- i. **Not the Pelawan story:** government cannot compel bad partners into productive deals, and expect a successful story of investment and transformation
- ii. **Avoid blocking productive black entrepreneurs:** The ARM story illustrates that preventing productive black entrepreneurs from future beneficial deals is counterproductive. Coercing Amplats to avoid collaborations with ARM resulted in lost investment opportunities and partnerships with opportunistic players. There are other alternatives to broadening productive participation.
- iii. **Move Beyond a "Political Connections Strategy":** Relying solely on political connections sidelines genuinely patient BEE partners, depriving them of opportunities due to the state's focus on internal insiders.

The following "big D" deals have the potential to elevate capital investment to a higher level:

- i. **State-business relations:** Positive progress hinges on a broader and more profound consensus among elites regarding a "next-generation" pathway that nurtures inclusive development.
 - Promote local/sectoral/cluster economic development through multi-stakeholder coalitions.
 - Embrace renewed efforts for enhanced and adaptable collaboration between business and government, founded on shared goals. Weak inter-elite cohesion cannot provide a sustainable foundation for development. A narrow focus on improving the business environment does not address the challenges of credible commitment and cooperation.

- ii. **Business-trade unions relations (post-doctoral research):** this is the missing deal in South Africa. The alliance between trade unions and the liberation movement, which was effective during the fight against Apartheid due to a shared opposition to an exploitative private sector, has become outdated. The need is now to redefine this partnership to drive cooperation between labour and business for industrial expansion towards job creation.

Labour absorption is intrinsically linked to corporate strategy. Transformation towards labour-absorbing industrial expansion requires collaboration between business and labour. A fresh approach to a partnership between these two sectors could empower the government to support this trajectory. This partnership entails sharing both benefits and risks. Aligning labour's interests with business—similar to shareholders—can reshape the investment strategy. This entails a fundamental shift from traditional employee share ownership schemes to a model that positions labour as a pivotal driver of investment.

To envisage unions as dynamic forces in the future, a transformation is necessary. The outdated concept of high wages as the sole objective, coupled with protests and antagonism towards the private sector, needs to evolve. The superior alternative involves building cooperative partnerships that facilitate investment and job creation.

- iii. **Mining: Business-Community Cooperation:**

Mining's geographical specificity is a crucial aspect. In South Africa, mining predominantly occurs in impoverished regions, as discussed in Part II. Historically, mining communities were excluded from the elitist accumulation under the BEE framework. However, since the 2010s, mining communities and workers have

responded collectively, using tactics like extended strikes and roadblocks to demand a share in the economic benefits of local mining operations (Nxele, 2022).

Leveraging these actions, communities wield what can be termed the "social license to operate," contrasting with the government-mandated "regulatory license" required for mineral rights. This social license refers to the power held by labour and communities to shape the operating landscape based on shared economic benefits.

Various land ownership models exist within mining areas, each with its complexities. Mining companies that partner with communities to ensure they gain from local mining-related advantages are more likely to shift mining from an enclave to an inclusive economic activity. This transformation at the local level can counter the "resource curse" (Nxele, 2015).

Case studies like the Royal Bafokeng and the Bakgatla ba Kgafela demonstrate how mining capital can collaborate with community-owned mining firms for direct involvement in ownership and production. While challenges exist in unifying communities with far-sighted leadership, even imperfectly aligned communities can find investment-compatible opportunities that ensure community involvement in operations.

Beyond ownership agreements, targeted efforts to localise specific parts of the mining value chain offer the potential to foster inclusive mining operations. This approach can reshape mining communities by cultivating sustainable livelihoods through economic participation. (For a detailed discussion of developing local economic linkages in mining communities, refer to Nxele 2016).

11.2.2. The ethos of productivity

The concept of productivity underpins a transformative shift, positioning proactive action on the patient side of the spectrum. Historically, the approach to BEE has been narrow, concentrating solely on transformation and assuming that investment growth would naturally follow suit. While legal mandates required the inclusion of historically disadvantaged individuals, in practice, these individuals often belonged to the politically connected elite. The legislation could not mandate productivity, and policies like mining charters did little to incentivise investment and productivity. In essence, the rules failed to promote productive behaviour and were ineffective in discouraging predatory actions. This study revealed that productive firms invested due to their corporate culture of generating profits through continuous capital investment, as opposed to seeking rent, speculating, or depleting assets.

Addressing the question of "how does capital investment occur?" led to the conclusion that patient capital facilitated credible commitments through cooperative, productive deals. These two-tiered deals successfully navigated political dynamics, legal frameworks, and profit-driven objectives.

Consequently, a strategy combining transformation with productivity emerges as a potent political manoeuvre. Establishing conditions conducive to "transfproductivity" (from the country to the firm level) yields the following outcomes:

- Fosters a positive-sum environment for capital investment, centred around productive economic activity. The journey from the present to the future becomes grounded in productive economic endeavours. A productivity-oriented approach aligns policy with productivity, demonstrating that productivity and transformation are not mutually exclusive.
- Productive economic activity and its underlying ethos stimulate economic growth, subsequently enabling the direction of the economy toward absorbing labour. Put simply, productivity drives job creation and sustainable tax revenues
- A productivity-focused approach values property rights, recognising them as the bedrock of enhanced productivity and increased investment

11.3. Conclusion: Updating the strategy to win the game

The examined case studies have tackled pivotal questions concerning black empowerment deals and investments:

- What accounts for the success and transformative impact of some mining investments, while others fall short?
- Why do certain BEE deals flourish while others flounder?
- What explains the variability in outcomes between deals that harmonise BEE pressures with investment and transformation, and those that fail to strike this balance?

Part I of this PhD dissertation contributes insights by theorising the causal mechanisms underlying successful and unsuccessful deals in relation to their investment and transformation outcomes. Notably, the notion that deals establish the basis for credible commitment represents a substantial contribution of this research. It suggests a shift in policy focus from merely refining rules to creating an environment conducive to nurturing favourable deals. This study

seeks to bridge the gap between rules and deals by providing a hypothesis that guides the tracing of causal mechanisms between deals and investment. Departing from the "more rules" approach hitherto followed in South Africa, this study proposes that fostering an ethos supportive of good deals complements the existing legal framework.

Contrary to an exclusive focus on rules, this research delves into the emergence of a new business class in post-Apartheid South Africa, highlighting their diversity and divergent trajectories. Importantly, the BEE policy fails to anticipate these differences and neglects to identify predatory opportunists as both real and adversaries of national development. While traditional adversaries were perceived externally to the ANC coalition, and possibly beyond those designated as historically disadvantaged, empirical evidence underscores the urgency to revise these assumptions. The study's finding underscores that successful BEE hinges on prudent patient entrepreneurship, with case studies offering both successful instances and cautionary tales.

The path of patient capital also presents a political triumph. The political elite could adopt a more superior approach by anchoring their power-building strategy on fostering economic capabilities. Liberation politics is no longer a winning strategy in South Africa; instead, the new frontier of governance and power lies in leveraging broad-based partnerships for wealth creation and job generation. A political party that masters the art of economic dynamism and wealth creation is poised for growth and success—an ideological shift that is imperative.

Lastly, the concept of "transformation" requires a more practical interpretation. Transformation can be limited to an increase in black-owned business registrations, or it can be oriented toward creating productive businesses that drive economic growth and inclusive participation. The choice lies between an isomorphic approach that focuses on superficial numerical representation and a transformative approach that adds value. Failing to adopt a definition of transformation aligned with South Africa's true needs will perpetuate the existing state of rules, uncertainty, low investment, and shallow, superficial transformation.

**PART II OF THE PHD. INDUSTRIAL MINING
AND SOCIAL INVESTMENT IN MINING
COMMUNITIES**

To what extent do mining investments in Part I translate to social investment in local communities?

In Part I, the exploration focused on the political economy of securing fixed mining investments in South Africa's platinum belt, which is situated in the country's most impoverished provinces. While the impact of mining on local communities is a contentious subject, the existing evidence remains ambiguous. Although numerous qualitative studies have predominantly examined the adverse effects of mining on health, the environment, and questionable agreements between mining corporations and local traditional authorities within these predominantly rural areas, there is a distinct lack of quantitative and empirical data regarding the influence of mining on local community livelihoods. This section of the PhD contributes valuable statistical insights by employing comprehensive individual-level census data coupled with geocoded mining data spanning from 1996 to 2011. Consequently, this project stands as the first empirical study to carefully assess the effects of mining on local community poverty and employment. Its representative nature stems from its focus on isolating the mining provinces of South Africa. The data encompasses a sample of 20 million person-observations at the ward level, which represents small geographical units within municipalities. This enables a direct comparison between residents within mining areas and those outside of these regions. Part II serves as an extension of Part I, elucidating the distributional ramifications that emanate from elite-level mining deals. This empirical evidence facilitates the establishment of mining policies grounded not only in normative considerations but also in empirical veracity.

Structure of Part II

Part II is comprised of two distinct papers, referred to as chapters. The initial paper, designated as Chapter 12, presents an econometric investigation into the repercussions of industrial mining on local communities within the five prominent mining provinces in South Africa. The key dependent variables under scrutiny are income poverty and employment. The subsequent paper, denoted as Chapter 13, delves into the ramifications of the Separate Development policy, which engendered

the creation of homelands, coinciding with the discovery of mineral resources within and around these designated areas.

Updates to the estimation methods dealing with staggered treatments

The completion of this doctoral work was confronted with new innovations improving on isolating causality in staggered treatment designs. The following review the literature at the frontier of this innovation. This author is committed to improve on his work by applying these tools in his post-doctoral work.

In recent years, research has highlighted limitations in conventional Difference-in-Differences (DiD) methods, particularly when dealing with staggered treatment designs involving multiple time periods. Callaway and Sant'Anna (2021) have addressed the shortcomings of assuming a constant treatment effect across treated cohorts and ignoring potential variations in treatment strength over time. Similarly, Wooldridge (2023) identified issues with two-way fixed effects that can lead to biased estimates when treatment effects evolve differently over time.

More specifically, the need for novel estimation techniques becomes evident in staggered treatment scenarios, where conventional DiD with two-way fixed effects may lead to biased results. The video lecture by Wooldridge (2023) emphasises the challenges of treating multiple groups at different times and highlights the inadequacy of the control group assumption in two-way fixed effects. Various estimators have been proposed to overcome these challenges, including, as noted above, the Callaway and Sant'Anna method which employs matching and individual treatment effects. The Wooldridge Mundlach approach extends the model to account for group-specific interactions, enabling accurate treatment effect estimation across diverse cohorts and time periods.

Sun and Abraham (Sun & Abraham, 2021) introduced event study estimators that reweight observations to effectively treat previously treated units as part of the control group. Callaway and Sant'Anna (2021) presented the "long" differencing method, which leverages extended differences beyond the intervention period to achieve doubly robust estimators. This approach demonstrates resilience to covariate functional form and reduced bias for plausible parallel trend violations. This method has received wide acceptance.

Lee and Wooldridge (2023) introduced a method that eliminates pre-treatment averages from outcomes, enhancing efficiency while maintaining control over treatment effects and parallel trends. This approach combines various treatment effect estimators and utilises all available control units, recovering some efficiency lost in the long differencing method. A key assumption is the absence of parallel trends and anticipation effects.

In conclusion, the growing body of literature underscores the limitations of conventional DiD methods in staggered treatment designs. Alternative approaches, such as those proposed by Callaway and Sant'Anna, Sun and Abraham, and Lee and Wooldridge, offer valuable solutions for achieving more accurate and robust treatment effect estimates. These methods allow for the inherent complexities of staggered treatment designs and provide researchers with tools to address bias and enhance the validity of their findings.

CHAPTER 12 – The economic impact of industrial mining investment on income poverty and employment in local communities in South Africa, 1996-2011

Abstract

This chapter undertakes a comprehensive analysis of the local economic consequences brought about by industrial mining operations on communities in South Africa. The study delves into this inquiry by utilising an extensive census sample comprising approximately 20 million observations from five principal mining provinces in economically disadvantaged areas. The time frame spans from 1996 to 2011, encapsulating the period from the inception of democracy to the peak of the commodity price upswing and mining BEE deals. This dataset is combined with geocoded data from roughly 400 mines annually, along with global commodity prices. The primary challenge faced by this research lies in isolating the impact of mining expansion on local income poverty and employment outcomes. To achieve this, the study capitalises on three distinct sources of variation. Firstly, the surge in commodity prices captures the surge in mining activity. Secondly, fluctuations in proximity to the nearest mine due to mine openings or closures introduce a source of heterogeneous exposure to mining activity. The third source of variation is the diverse geological commodity clusters, each entailing distinct localised linkages and consequently differing net impacts. Exploiting these variations, the study examines various subsets of samples, including data subsets defined by province, proximity to mines, and commodity type.

Generally, when a mine opens locally, the probability of an individual moving out of income poverty increases significantly. Similarly, the probability of gaining employment increases significantly. The commodity price boom is an important moment. It amplifies both the benefits and trade-offs of mining activity. Intensity of mining produces the same effect. Impacts differ by commodity, and by province. During price upswings, platinum and gold emerge as key catalysts for diminishing poverty and fostering employment growth, with the Limpopo province claiming a significant portion of these positive effects. The study raises concerns regarding the transitory benefits of price booms and the potential long-term adverse consequences of mining activity.

12.1. Introduction

12.1.1. Studying the local impact of mining

What is the statistical impact of industrial mining on local communities in South Africa? Drawing inspiration from Aragón and Rud's (2013) seminal work, which estimated the effects of a large gold mine on nearby areas in Northern Peru, multiple studies have examined local impacts in various developing nations. Chuhan-Pole et al. (2015) analysed the effects of the gold rush on poverty, inequality, and employment in Ghana from 1993 to 2013. Tolonen (2014) assessed mining's influence on female empowerment and child mortality in Burkina Faso, Ghana, Mali, and Tanzania from 1975 to 2013. Berman et al. (2017) connected mining extraction with conflict events in African countries, exploring welfare changes during commodity price booms from 1997 to 2010. Bazillier and Girard (2020) investigated Burkina Faso's gold boom impact on local consumption between 1998 and 2014. These studies reveal both short- and long-term local trade-offs across various African nations.

However, limited empirical evidence exists regarding mining's effects on local communities in South Africa. Nxele (2015) examined industrial mining's influence on income poverty in Limpopo province between 2001 and 2011, while Axbard, Benschaul-Tolonen & Poulsen (2019) focused on the impact of mining on local crime from 2003 to 2012. Despite South Africa's status as a major mining hub, these papers remain among the few econometric studies available. This issue holds significance for three key reasons. First, the Marikana massacre in 2012 underscored community hardships despite residing in mining regions (Alexander, 2013; Nxele, 2022). Second, South Africa's mining policy aims to shift from isolated enclaves to inclusive, community-integrated mines. To gauge policy effectiveness, it is crucial to understand mining's impact on local communities. Third, while qualitative studies like the Benchmarks Foundation's work (2012, 2017a,b) highlight mining's detrimental effects, empirical evidence using appropriate data and techniques is needed to comprehend and address economic threats such as poverty and unemployment in mining communities. This study aims to fill this gap using available post-Apartheid census data in South Africa, uniquely examining the threat of income poverty and unemployment due to mining at the local level.

Focusing on South Africa's five largest mining provinces—Limpopo, North West, Mpumalanga, Northern Cape, and the Free State—this study employs census data from 1996, 2001, and 2011, alongside individual-level data provided by Statistics South Africa.¹⁰⁷ This dataset covers approximately 20 million working-age individuals across the provinces, analysed at the ward council level. Coupled with mine-level data and mine location information, this study comprehensively explores the impact of mining on local poverty and employment.

The study encounters the challenge of isolating mine expansion's impact on income poverty and employment outcomes. To overcome this, three sources of variation are exploited: commodity price booms indicating mining activity expansion, changes in ward proximity to mines due to openings and closures, and varying geological commodity clusters with distinct local linkages and net impacts. Nonetheless, the study acknowledges recent literature advancements that deal with staggered treatments, where treated groups act as controls over time (Callaway & Sant'Anna, 2021). Therefore, the study shies away from claiming causality.¹⁰⁸

In terms of findings, opening a local mine generally increases the likelihood of individuals moving out of income poverty and gaining employment. Commodity price booms magnify both benefits and trade-offs associated with mining. Mining intensity yields similar effects, which differ by commodity and province. Platinum and gold significantly drive poverty reduction and employment during price booms, with the Limpopo province bearing the brunt of these impacts.

The subsequent sections of the paper are organised as follows: Section 12.2 presents a literature review of empirical mining impact studies. Section 12.3 outlines the analytical framework for this study's empirical strategy. Section 12.4 describes the data and provides descriptive statistics. Section 12.5 details the empirical strategy. Sections 12.6 to 12.8 present the study's results, while Section 12.9 conducts robustness checks. Section 12.10 explores alternative explanations and study limitations. Finally, Section 12.11 concludes the paper.

12.1.2. The significance of mining in South Africa

South Africa stands as a global leader in minerals and metals mining. It possesses 80 per cent of the world's platinum group metals, manganese, and substantial deposits of gold, coal, copper, iron

¹⁰⁷ Census 2021/22 was underway at the time of writing. Census data before 1996 is not available at individual or household level, nor is it comparable to post-Apartheid South Africa censuses.

¹⁰⁸ The author commits to addressing this concern through further iterations.

ore, and other resources. As of 2021, mining contributed 8.4 per cent to the country's GDP (R372 billion), generated US\$37 million in export revenue, and employed 453,000 individuals (Minerals Council South Africa, 2021). Despite this, local mining communities have not fully reaped the benefits of broader community upliftment. This disparity was evident during the price boom of the 2000s. Over 80 per cent of mining activity in South Africa occurs in the five provinces, encompassing over 1000 mines, which collectively account for 40 per cent of the nation's population and 30 per cent of its GDP. These provinces are primarily rural and among the most economically disadvantaged. This study delves into the impact of mining on local communities between 1996 and 2011 within this context.

12.2. Review of empirical studies on local level impacts

Historically, evidence regarding natural resource impacts on living standards primarily relied on aggregate country-level data, offering limited insights into local economic effects. Contemporary research shifts focus to studying within-country local level impacts due to scepticism surrounding cross-country regressions. Inspired by Aragón and Rud's (2013) work, most studies utilise difference-in-differences analysis to explore the local economic impacts of mining.

Aragón and Rud (2013) found a positive effect on real income linked to a mine's demand for local inputs, with this effect diminishing over distance. This finding is mirrored by the World Bank's study on Peru, which identified higher living standards in producing districts while noting increased consumption inequality within producing provinces. Other studies address gender-specific impacts, criminality, environmental effects, and distributional dynamics. Notably, Kotsadam & Tolonen (2016) focus on female employment, while Bazillier and Girard (2020) compare artisanal and industrial mining's distributional impacts in Burkina Faso.

The literature highlights mining's potential for local employment and higher incomes but also underscores trade-offs like rising inequality, increased crime, shifts from agriculture to mining, environmental impacts, and potential reduced educational investment. Although existing reviews such as Cust and Poelhekke (2014), Gamu (2015), and Van Der Ploeg and Poelhekke (2017) offer consolidated insights, they stress the need to examine a broader spectrum of mining's local impacts.

12.3. Analytical Framework: Impact of mining on surrounding areas

The analytical framework draws inspiration from Aragón and Rud (2013), as well as insights from Kotsadam and Tolonen (2016), Berman et al., (2017), and Bazillier and Girard (2020). Aragón and Rud developed a framework to assess the effects of expanding a mine driven by increased gold production and a policy promoting local employment and supply linkages. The work of Morris, Kaplinsky and Kaplan (2012) further illuminates these linkages in the context of mine operations.

Aragón and Rud's (2013) work serves as a foundation for constructing a framework that closely examines the impact of mines on local livelihoods. With local economic linkages in play, mining-driven economic activity can trigger positive multipliers, potentially reducing poverty and boosting employment. However, industrial mines, due to pollution, can also worsen environmental issues and health, potentially intensifying local poverty and affecting agricultural jobs. Consequently, assessing the impact of mine operations on local income, poverty, and employment entails capturing both positive and negative effects.

Drawing from Moretti's (2010) concept of local labour demand shocks, Aragón and Rud incorporate the notion that new business openings generate not just direct jobs, but also additional employment through increased demand for local goods and services. Under this framework, the areas surrounding mines constitute a local economy, distinct from more distant regions.

The local demand shock results in higher wages in local service sectors around mining areas compared to more distant locales. This wage increase, influencing cross-sector labour mobility, stimulates demand and raises prices of local goods, including agricultural products. Given limited inter-regional mobility and a rising supply of local goods, this positively impacts real income (Aragón & Rud, 2013), lifting some individuals out of poverty.

Additionally, building on Aragón and Rud (2016), the framework considers the dynamic between traditional agriculture and modern industry prompted by mining. As observed in predominantly rural mining regions, agriculture, both commercial and subsistence, is a major local livelihood. Industrial mines near agricultural farms release pollutants, which accumulate locally and sometimes spread.

Table 33 – Percentage GDP contribution by sector per province, 1996 and 2016

		Agriculture	Mining	Manufacturing	Tourism	Government
Limpopo	1996	2.1	33.86	3.33	14.29	18.2
	2016	2.99	28.59	2.88	15.82	18.99
North West	1996	3.12	44.74	5.17	10.51	12.07
	2016	2.57	29.03	6.47	12.73	13.92
Mpumalanga	1996	3.68	31.84	11.97	13.1	12.69
	2016	2.69	24.85	13.94	15.14	12.19
Northern Cape	1996	6.34	34.63	3.34	10.05	14.23
	2016	7.01	28.53	3.3	12.62	14.99
Free State	1996	6.1	23.45	9.4	15.39	15.08
	2016	4.37	12.82	10.89	17.31	15.96
Rest of country	1996	3.25	3.59	18.82	14.92	20.96
	2016	2.74	1.20	16.10	16.22	16.63

Source: SALGA Municipal Barometer (<http://www.municipalbarometer.org.za/DataBank>). Note: only sectors of comparative interest shown.

As highlighted by Aragón and Rud (2016), this spatial arrangement affects agricultural factor productivity due to pollution-related decreases. This compounds local poverty and diminishes agricultural employment in an economy where agriculture is pivotal. Hence, the framework's interpretation in assessing the impact of industrial mines on local communities must encompass both negative and positive repercussions stemming from mining activities.

The following sections employ this framework to build a model to estimate the impact of mining on local communities.

12.4. Data and overview statistics

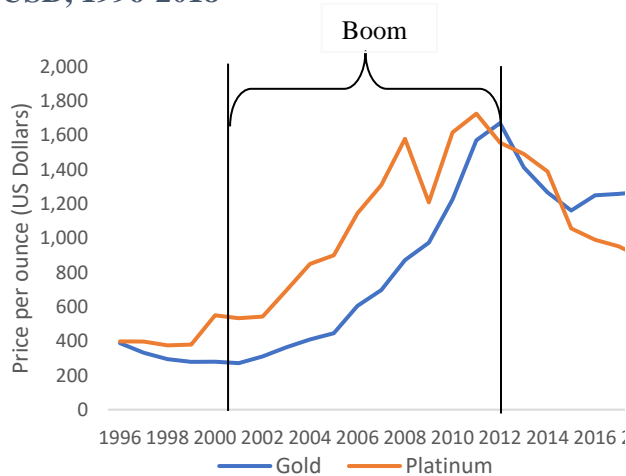
12.4.1. Prices, production, and poverty trends

During the first decade of the millennium, there was a notable commodity price boom, as depicted in Figure 42, showing the world prices of gold and platinum. South Africa, being resource-rich, saw an increase in mineral export earnings, primarily driven by rising prices and occasional mine

expansions and openings (see Figure 43).¹⁰⁹ These factors contribute to the variance examined in this study.

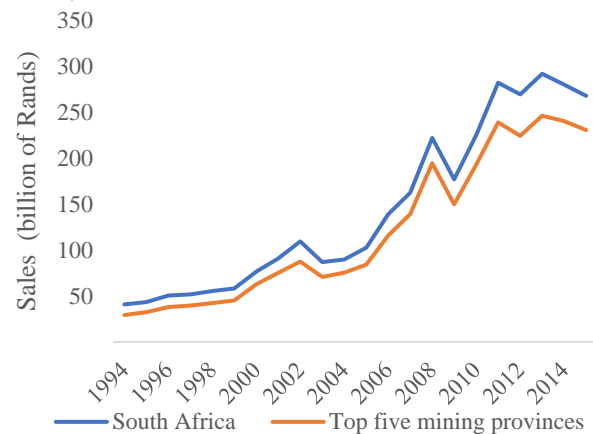
Two significant relationships deserve discussion concerning mining commodity prices. The first relates price and production, while the second links price and local poverty. The intricate dynamics of the price-production relationship are influenced by political economy, geology, and commodity-specific aspects. For example, while platinum, iron, and copper production increased with higher prices, gold mining experienced closures due to depleted ores requiring uneconomical deep mining despite price hikes. This chapter investigates changes in mining activity considering mine openings, closures, and commodity-specific variations.

Figure 42 – Gold and platinum prices, USD, 1996-2018



Data Source: Index Mundi Commodity Price Indices (2022)

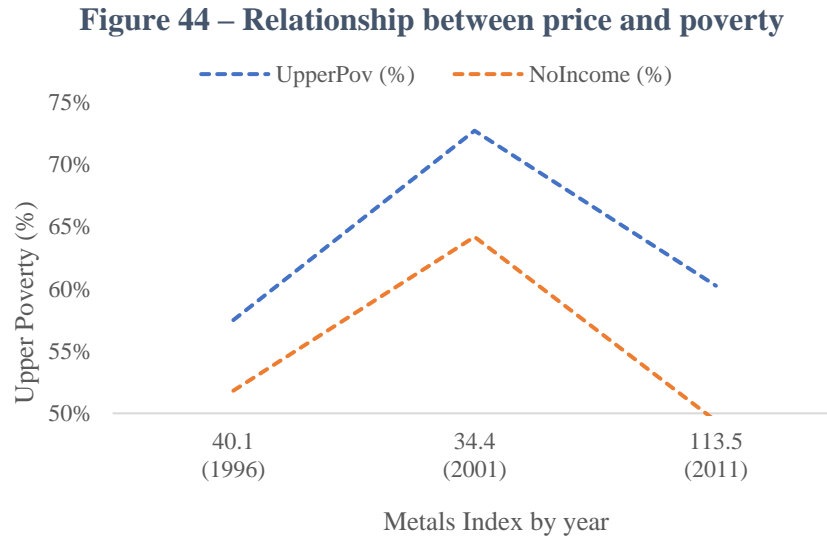
Figure 43 – Estimated primary export sales, 1994-2015



Data Source: Department of Mineral Resources (2016). The “top five” mining provinces are Limpopo, North West, Mpumalanga, Free State, and Northern Cape.

¹⁰⁹ According to the Chamber of Mines of South Africa, South Africa is generally a price taker of commodity prices (Baxter, 2016). The expectation therefore is that the world price is exogenous to local conditions. However, this may not be completely true for platinum, where South Africa is the leading global supplier – as discussed in earlier chapters of the PhD.

Examining the link between price and poverty, Figure 44 shows that between 1996 and 2001, world commodity prices declined while poverty rates in South Africa increased. From 2001 to 2011, commodity prices surged, and South African poverty rates decreased. While not implying causation or correlation, this observation provides context for the study.



Data Source: Index Mundi Commodity Price Indices (2022) and StatsSA (2022)

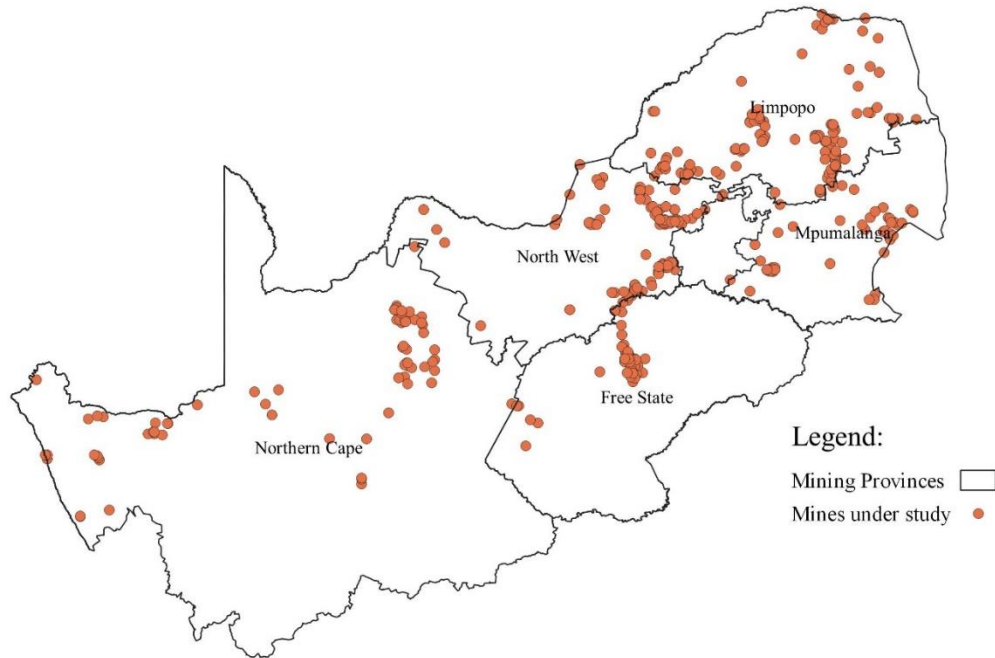
Existing literature overwhelmingly supports increased income poverty between 1996 and 2001 (Leibbrandt et al., 2005; Leibbrandt, Levinsohn & McCrary, 2005; Bhorat & Kanbur, 2006; Özler, 2007), followed by a substantial decline until 2010 (Finn, Leibbrandt & Woolard, 2013; Gumede, 2014).¹¹⁰ This trend's confirmation is crucial as it forms the backdrop for subsequent chapters.

12.4.2. Areas studied and mines

Focusing on five provinces highlighted in Figure 45 provides an optimal context for studying natural resource impacts. These provinces, including Limpopo, North West, Mpumalanga, Free State, and Northern Cape, consistently exhibit above-average poverty rates (StatsSA, 2014, 2017) – see Table 34; offering fertile ground for studying poverty and unemployment dynamics. A gradual poverty reduction from 2001 to 2011 adds depth to comprehending mining's role due to the provinces' reliance on mining.

¹¹⁰ Most of these studies, such as Leibbrandt et al. (2005), and Bhorat and Kanbur (2006), also used the census data.

Figure 45 – Map of the five mining provinces, with all mines under study



Source: Mapped using QGIS using mining data from USGS and shapefile from ArcGIS

Predominantly rural provinces enable isolating mining's impact and evaluating its significance. Agriculture and tourism stand as the other major sectors in these provinces, as illustrated in as illustrated in Table 69 in APPENDIX A.

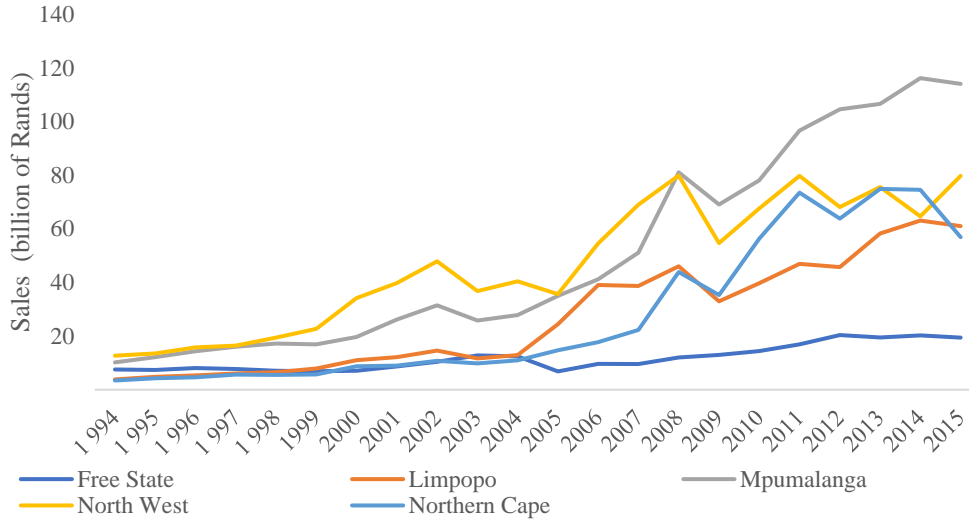
Table 34 – Headcount poverty in the five provinces under study, 1996 to 2015

	1996	2001	2011	2014/15
Free State	62.0	77.3	52.4	54.9
Northern Cape	64.5	72.3	58.2	54.9
North West	62.1	75.6	59.9	64.3
Mpumalanga	63.0	79.1	63.8	59.3
Limpopo	72.4	82.5	70.1	72.4
<i>National average</i>	58.6	74.0	53.2	55.5

Data Source: StatsSA census data 1996, 2001 and StatsSA (2017)

Moreover, these provinces possess abundant mineral resources, contributing around 80 per cent of South Africa's total mineral sales from 2000 to 2018. This sizable sector significantly affects the provinces' socio-economic well-being.

Figure 46 – Estimated primary mineral total sales, 1994-2015



Data Source: (Department of Mineral Resources, 2016). Note that it is not clear whether the prices are nominal or real.

Significantly, the provinces experience a notable increase in both mining intensity (the number of mines) and size (see Figure 46), making them ideal for assessing the empirical strategy's success by comparing communities exposed to the demand shock with those unaffected.

12.4.3. Data and Main Variables

The empirical analysis merges individual data with mine and commodity price data from 1996 to 2011. The data captures the start of the commodity boom until its peak in 2010/11. StatsSA provided access to post-apartheid census data of 1996, 2001, and 2011 at the individual level. This dataset represents municipal wards, the smallest electoral subdivisions.¹¹¹ Around 6 million working-age individuals per wave across five provinces and 1,240 wards constitute this dataset.¹¹²

Outcome variables are income poverty and employment, where income categories define the former. Poverty lines are established using StatsSA's guidelines, focusing on the Upper-bound and No Income poverty lines (see APPENDIX E for outline of the income categories, the poverty lines,

¹¹¹ The census data provides place names (i.e., residential suburbs), which enable the dataset to be transformed into ward level by locating people in their respective wards. APPENDIX E, Table 83 provides details and sources of information.

¹¹² Working age = 15-65 years, following StatsSA's definition; see (Statistics South Africa, 1998).

as well as how the variable was calculated).¹¹³ Employment is indicated by a binary variable. Control variables include gender, education, race, and age at the individual level, and access to utilities, housing type, and population per ward at the ward level.

The data on mines is collected from the Department of Mineral Resources (2015), the USGS (2014), and company reports.¹¹⁴ Over 400 industrial mines per wave are in the compiled dataset, including GPS coordinates, opening/closing dates, and produced commodities. Commodity prices from Index Mundi (2022) are also included.

The study constructs a distance measure between wards and their nearest mine each year, considering new openings or closures.¹¹⁵ This distance, varying annually due to mine developments, is calculated using trigonometric functions estimating arc distances on Earth's surface (see APPENDIX E for details). The 10-kilometer threshold is chosen as a dividing line, categorising wards as "close to mine" or "far from mine." This creates a dummy variable of mining activity, $M_{w,t}$, defined as $M_{w,t} = 1$ where individuals are located within 10km. This dichotomy will be referred to as "mining" and "non-mining" areas or communities.

This creates a dummy variable of mining activity, $M_{w,t}$, defined as $M_{w,t} = 1$ where individuals are located within 10km. This dichotomy will be referred to as "mining" and "non-mining" areas or communities.¹¹⁶

¹¹³ Focusing on the working age in relation to poverty is consistent with the literature on poverty in South Africa, where children and pensioners are taken care of by the welfare system of income grants and other government services such as healthcare (Leibbrandt, Wegner & Finn, 2011). Further, StatsSA explicitly advises users to restrict analysis involving income to the working age population (Statistics South Africa, 2002).

¹¹⁴ The data is limited to industrial mines of varying size.

¹¹⁵ A municipal ward's GPS coordinates are a ward's central voting station. This method considers that voting stations are chosen by the Independent Electoral Commission (IEC) based on communitywide accessibility. The study uses the IEC's *Voting Station finder* to locate the precise ward GPS coordinates. Caution is taken that the within-ward internal variation of distance could differ due to size of mine and size of ward. Some wards are very large, and distances from the centre of a ward could be large. Since the choice of distance drives the size of the estimates, the study will include results for different distances (in the appendices).

¹¹⁶ At the outset, this study does not know the correct distance threshold. The choice of distance is important to correctly estimate the effects (Tolonen, 2014) and to estimate the true counterfactual. To determine the threshold of mining communities, or the treated communities, the study considered several tools to calculate this distance. First, the study ran several regressions at different distance thresholds to determine the threshold by which impacts of mining tend to zero. This mostly happens beyond 10km. Second, the study collected data on the size of each of the municipal wards. While the study found that the size range within province is large, from 1km² to north of 70km², the average ward distance (by taking the square root of the size of ward) is 8-10km except in Northern Cape. Third, the study considered South African literature that examines local mining communities. Qualitative studies focusing on the

Mwt (0/1) also shows if there is an effect of mine opening/closing in a place without mining already. The study calls this the extensive margin. To account for situations where there are several mines in proximity, the study created the “count” variable. The variable captures how many mines are within Mwt (e.g., 10km, and other alternative specifications of distance). Therefore, the study will present information on the effect of mine opening/closing in a ward with no other mines (extensive margin) and information on the additional effect of a mine opening/closing in ward with mines (intensive margin).

impacts of mining in South Africa mostly use this threshold to define local mining areas (Magak, 2022; Mine Health and Safety Council, 2022).

Table 35 – Descriptive statistics: Poverty and Unemployment, and mine opening/closing trends between 1996 and 2011

	1996	2001	2011	Detail
<i>All five provinces</i>				
% People in Upper poverty	58%	73%	60%	
Number of people in Upper poverty	4,197,320	5,103,103	5,119,088	
% People in No Income poverty	52%	64%	49%	
Number of No Income poor people	3,782,618	4,504,092	4,194,752	
% People employed	25%	26%	30%	
<i>Within 10km of a mine</i>				
Number of people in $M_{w,t} = 1$	3,852,140	4,615,396	5,297,001	
Number of poor people in $M_{w,t} = 1$	2,176,299	3,307,646	3,180,487	
% People in poverty in $M_{w,t} = 1$	56%	72%	60%	
Employment in $M_{w,t} = 1$	35%	28%	35%	
<i>Outside 10km of a mine</i>				
Number of people in $M_{w,t} = 0$	1,365,394	2,031,289	2,278,923	
Number of poor people in $M_{w,t} = 0$	853,144	1,529,447	1,417,401	
% People in poverty in $M_{w,t} = 0$	62%	75%	62%	
Employment in $M_{w,t} = 0$	12%	11%	14%	
<i>Information on wards and distance to mine</i>				
Number of wards	1,240	1,238	1,239	
Number of wards in $M_{w,t} = 1$	895	834	819	Net decline
How many wards have mines?	126	121	118	Net decline
How many wards have more than one mine?	62	59	61	c.50% average
Max number of mines within a ward	18	17	16	(ward 34501004)
Average number of mines excluding maximum	2	2	2	
Number of wards with mines inside ward	160	154	157	
Number of wards in $M_{w,t} = 0$	345	404	420	
<i>Information on mines</i>				
Number of mines	418	395	399	Net closure
Number of mines in Northern Cape	64	57	51	Net closure
Number of mines in North West	84	83	85	Net opening
Number of mines in Mpumalanga	93	97	117	Net opening
Number of mines in Limpopo	111	107	116	Net opening
Number of mines in Free State	66	51	30	Net closure
Number of mines that close	n/a	27	27	
Number of mines that open	n/a	4	31	

Table 35 summarises poverty, unemployment, and mine opening/closing trends by year and distance threshold. Notably, more mines closed than opened between 1996 and 2011. Mining areas are more densely populated due to historical policies.

Table 36 – Mine opening and closing by ward, 1996 – 2011

	1996	2001	2011
Opening 50km	n/a	80	47
Opening 10km	n/a	51	26
Opening mine	n/a	33	22
Closing 50km	n/a	146	102
Closing 10km	n/a	123	14
Closing mine	n/a	40	23

Source: Author. *Note that the above is not the number of mines closing, opening, but the number of wards that experience an opening of a mine locally.*

Table 36 documents information on mine openings and mine closures over time by wards. In the data set there are more closures than openings.¹¹⁷ This is consistent with the story of 'missed investment' during the boom. The theoretical expectation is that in areas where mines open, poverty reduction will be observed.

Table 37 provides a table with number of mines by commodity over time. This information provides the context of the variation by commodity that will be explored in this chapter, in addition to the other sources of variation already discussed (i.e., effect of price changes, extensive and intensive margin).

¹¹⁷ This information is limited by the three waves (1996, 2001, 2011).

Table 37 – Mines by commodity over time, 1996 – 2011

	1996	2001	2011
Platinum	69	73	99
Gold	105	90	60
Diamond	16	16	18
Copper	24	24	23
Coal	62	73	100
Nickel	1	3	3
Iron	10	11	12
Lead	5	4	4
Tin	7	0	0
Zinc	2	2	2
Manganese	21	21	19
Magnesium	1	0	0
Vanadium	4	4	4
Phosphorus	11	10	10
Antimony	3	3	3
Asbestos	17	9	0
Chrome	42	37	35
Feldspar	0	0	0
Britholite	1	1	0
Beryllium	1	1	0

Source: Author

Table 38 presents summary statistics, by $M_{w,t}$. The variables include the outcome variables, individual descriptors, ward characteristics, as well as mining related summary statistics.

Table 38 – Summary statistics

Variables	$M_{w,t} = 1$		$M_{w,t} = 0$		Total	
	Mean N = 13,764,537	Standard Error	Mean N = 5,675,606	Standard Error	Mean N = 19,440,143	Standard Error
<i>Individual level (working population: 14-65)</i>						
Upper poverty	0.63	0.0001	0.67	0.0001	0.64	0.0001
No Income poverty	0.55	0.0001	0.56	0.0001	0.55	0.0001
Employment	0.33	0.0001	0.30	0.0001	0.32	0.0001
Age	33.24	0.0036	32.02	0.0058	33.18	0.0031
Sex (Male=1)	0.47	0.0001	0.45	0.0002	0.47	0.0001
Race = black	0.90	0.00008	0.85	0.0002	0.88	0.00007
Race = Coloured	0.03	0.00005	0.07	0.00002	0.04	0.00005
Race = Indian/Asian	0.004	0.00002	0.003	0.00002	0.004	0.00001
Race = White	0.07	0.00007	0.07	0.0001	0.07	0.00006
Education years	8.07	0.0013	8.05	0.0020	8.07	0.0011
<i>Ward level (ratios)</i>						
No piped water	0.16	0.0035	0.14	0.0045	0.16	0.0029
No sewerage system	0.64	0.0064	0.70	0.0099	0.66	0.0055
Refuse removal	0.63	0.0068	0.69	0.0109	0.64	0.0058
No electricity lights	0.32	0.0050	0.32	0.0087	0.32	0.0043
Traditional Informal dwelling	0.25	0.0037	0.20	0.0055	0.24	0.0031
Total Population	8326.51	62.3336	8825.46	130.241	8446.19	56.8320
<i>Mines</i>						
Multi-commodity ward	0.046	0.0035	0.022	0.0037	0.038	0.0028
Number of mines	0.286	0.0169	0.045	0.0218	0.227	0.0140
Platinum ward	0.204	0.0067	0.103	0.0090	0.179	0.0056
Gold ward	0.127	0.0055	0.082	0.0082	0.116	0.0047
Copper ward	0.034	0.0030	0.147	0.0105	0.061	0.0034
Coal ward	0.143	0.0058	0.075	0.0078	0.126	0.0048
Diamond ward	0.052	0.0037	0.116	0.0095	0.067	0.0036
Chrome ward	0.081	0.0045	0.054	0.0067	0.075	0.0038
Feldspar ward	0.082	0.0045	0.024	0.0046	0.068	0.0036
<i>World commodity prices (\$US)</i>						
Platinum	859.72	9.8528	966.18	18.3181	885.26	8.7076
Gold	720.04	9.6647	814.22	18.2210	742.63	8.5675
Copper	4108.91	53.7535	4629.48	101.3922	4233.78	47.6556
Coal	59.64	0.6426	66.26	1.2043	61.23	0.5689
Diamond	29699.56	230.2688	32438.64	406.5090	30356.57	201.0685
Chrome	158.30	2.2329	180.66	4.1991	163.67	1.9784
Feldspar	53.41	0.1226	54.86	0.2119	53.76	0.1065
Industrial index	100.02	1.0889	110.56	2.0541	102.55	0.9654
Metals index	61.24	0.5939	67.10	1.1186	62.64	0.5264

12.5. Empirical Strategy

12.5.1. Identification strategy

The three waves in this study provide the following quasi-experimental set up. In 1996 data is collected, providing information on ward poverty and employment, individual and ward characteristics, and mining activity. Between 2001 and 2011, there is an expansion of mining activity driven by increased commodity prices. Therefore, the study exploits two sources of variation. First, it exploits the change in commodity prices. For the pre-existing mines in 1996, treatment is strictly the change in commodity prices, which will mainly be the world metals index. For wards in which new mines open nearby, the additional treatment is the opening of these mines (change in distance to within 10km), where the first year of production is considered the start of the treatment. This is the second source of variation (see Figure 45). There is limited variation in the opening and closing of mines in the dataset at ward level. This is not the case at suburb level. For example, if a mine has two wards, and an additional mine opens, the $M_{w,t}$ variable stays the same. To alleviate this limitation, the results will measure the impact of intensity of mining as measured by number of mines nearby.

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As mentioned above, the study uses the opening and closing of mines, and the price boom, as the treatment. First, the study compares wards located close to mines with those far from mines. Second, *within mining areas*, the study compares those closest to mines to those farther away. In order for the study to be valid, the parallel trend assumption must hold. That is, the study assumes that the impact of mining activity declines with distance from a mine, and that wards close and far from mines would have performed similarly in the absence of new mining activity.

A major drawback is the lack of data before 1996, limiting historical trend analysis between mining and non-mining wards. To mitigate this, the identification strategy compares existing mining areas to those without, focusing on abrupt mining expansions. Figure 47 illustrates the basic idea behind the identification strategy. It plots the conditional mean of poverty for individuals located within 10 km from a nearest mine and those located farther away. It reveals comparable macro trends with slightly lower poverty in mining regions. This similarity raises a concern that wards located close to mines might have already been better off than non-mining wards. This situation could result in the study merely capturing pre-existing unconditional trends.

To truly observe the effects resulting from new mining activity, the study delves into areas that initially had minimal or no mining activity. The Sekhukhune District in Limpopo serves as an example, where the rapid development of platinum mines occurred in the 2000s due to BEE deals. Figure 48 depicts that individuals close to certain mining activity were poorer before 2001. However, post-2001, individuals in areas experiencing an expansion of mining witnessed a more pronounced decline in income poverty. Similar diagrams are presented in APPENDIX A for employment and income outcomes.¹¹⁸

¹¹⁸ Section 12.9 and APPENDIX C address concerns that the identification strategy may be invalidated by other unobserved time-varying factors correlated with the expansion of mining and affecting differently areas closer and farther from mining wards.

Figure 47 – The conditional mean of poverty

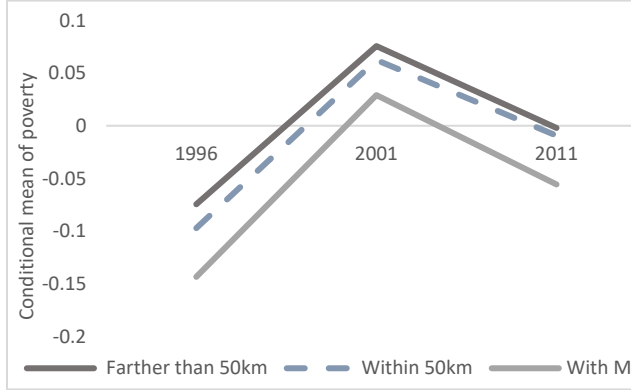
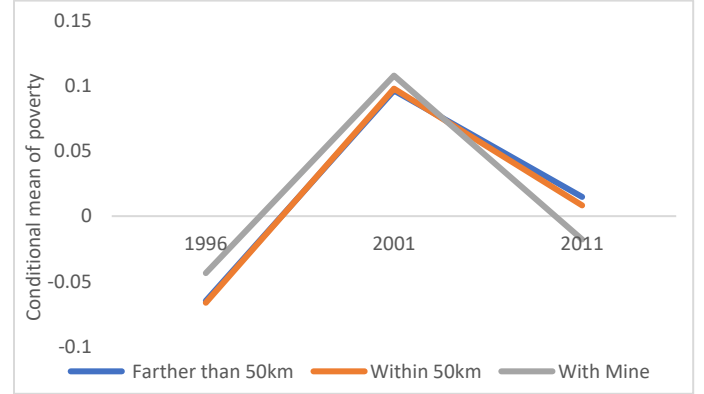


Figure 48 – The conditional mean of poverty in Sekhukhune district, Limpopo



12.5.2. Baseline Specification

To evaluate the impact of mining activity on ward-level poverty and employment, the following regression are estimated:

$$y_{i,w,t} = \beta_0 + \beta_1 M_{w,t} + \beta_2 Z_{i,w,t} + \beta_3 X_{w,t} + \alpha_1 w + \alpha_2 dt + \varepsilon_{i,w,t} \quad (1)$$

$$y_{i,w,t} = \beta_0 + \beta_1 M_{w,t} + \beta_2 (\log P_{w,t} \times M_{w,t}) + \beta_3 Z_{i,w,t} + \beta_4 X_{w,t} + \alpha_1 w + \alpha_2 dt + \varepsilon_{i,w,t} \quad (2)$$

where $y_{i,w,t}$ is the outcome variable. Relating to poverty and employment, $y_{i,w,t}$ is a binary variable equal to 1 if an individual i is income poor (employed) in ward w in year t , and equal to 0 otherwise. $M_{w,t}$ is a binary variable indicating the presence of a mine within 10km of ward w at time t . The main measure of change in the magnitude of mining activity is the commodity price ($\log P_{w,t}$), which is the log of the price of the nearest commodity to a ward¹¹⁹. Both $M_{w,t}$ and $\log P_{w,t}$ vary with time due to the opening and closure of mines (e.g., mines of differing commodities). The specification also includes a vector of individual-level controls $Z_{i,w,t}$ and ward-level controls $X_{w,t}$, ward-level fixed effects w , and district multiplied by year fixed effects dt . The main parameters of interest are β_1 and β_2 in equation 2, which capture the size of impact on $y_{i,w,t}$ due to a change in commodity prices, varying by exposure to mining ($M_{w,t}$).

¹¹⁹ In cases where a ward has more than one close mine, the nearest largest mine is selected.

The study employs the estimator developed by Correia (2017, 2019) to estimate the model. This estimator efficiently handles fixed effects and instrumental-variable regressions in the presence of many levels of fixed effects¹²⁰. It is used even though the primary outcomes are binary variables. The Linear Probability Mode (LPM) is chosen due to its efficiency and interpretability (Guimaraes, 2017), given the large dataset used in the study. The LPM also allows for easy control of fixed effects and adjustment of standard errors for autocorrelation and clustering.

MAIN RESULTS

The results section is structured into three key sections. Section A focuses on the overarching impact of mining, comparing areas in close proximity to mining sites with those further away (i.e., $M_{w,t} = 1$ versus $M_{w,t} = 0$). In pursuit of this objective, this section will initially present results based solely on Mwt. Subsequently, it will delve into the effects of mine openings and closures. Lastly, it will provide results categorised by specific minerals.

Moving on to Section B, we will present the outcomes of the second specification, considering both Mwt (0/1) and Pwt. This analysis will also be differentiated between instances of mine openings and closures.

Finally, in Section C, we will reveal the findings related to the intensive margin: Mwt (0/1) and Mwt (count). This section will also assess the ramifications of mine openings and closures, as well as the consequences of price fluctuations.

The case study literature pertaining to South African mining communities suggests that those residing in immediate proximity to mines disproportionately bear the adverse effects of mining. These detrimental impacts encompass forced relocations to facilitate mining development (Mnwana, 2015), erosion of subsistence farming – a primary source of livelihood in rural regions (Shackleton, 2020), and health issues arising from dust exposure (McCulloch, 2009). Furthermore, these effects can extend to nearby commercial agriculture, impacting health through mining-related pollutants, degrading soil quality, and compromising labour productivity due to health repercussions (Aragón & Rud, 2016). The decline in agricultural output, resulting from decreased

¹²⁰ This decision also accounts for the very large dataset requiring the most efficient estimating technique. See Sergio Correia at <https://github.com/sergiocorreia/reghdfc> for more information.

productivity, closure of commercial farms, and reduced subsistence farming, could exert downward pressure on incomes and overall employment levels.

Nevertheless, it can be argued that those living closest to mines might benefit from local economic activity. The net impact of mining on local poverty and employment hinges on the balance between economic linkages and positive multiplier effects, as opposed to the magnitude of adverse spillovers from mining. This section will endeavour to assess these aspects in proximity to mining areas. Section 12.9 will subsequently conduct robustness checks to address concerns regarding specification and estimation procedures.

12.6. SECTION A – Overall impact of mining at the local level

12.6.1. Baseline impact of mining

This section presents empirical results of the model specification, focusing on the baseline impact of mining. The establishment of new mines is anticipated to boost nominal income for workers in affected sectors and stimulate local employment (Horwitz et al., 2002).¹²¹ It is also expected to increase the price of goods traded locally (Aragón & Rud, 2013). Notably, due to the limited data sample years, these results primarily reflect short-term effects.

Table 39 - Baseline estimation results: Income poverty (Upper Poverty and No Income) and Employment

	(1) Upper Poverty	(2) No Income	(3) Employed
$M_{w,t} \leq 10\text{km}$	-0.0294 *** (0.0105)	-0.0401 *** (0.0113)	0.0313 *** (0.0104)
Constant	1.508*** (0.142)	1.160*** (0.129)	-0.503*** (0.144)
Ward fixed effects	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes
Observations	19,109,159	19,109,159	19,109,159
Mean of y	0.644	0.556	0.315

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

¹²¹ Mining employment is expected to increase locally also because of the mining policy (mining charter) requiring mining companies to focus on local communities for opportunities.

Table 39 documents the poverty-reducing and employment-boosting effects of industrial mining on individuals residing within mining wards.¹²² The estimation employs ward and district factors multiplied by year fixed effects for reliable estimation.¹²³ Columns 1 and 2 focus on two StatsSA poverty definitions: Upper Poverty and No-Income Poverty. For both definitions, individuals residing within 10km of mines exhibit lower income poverty than those living farther away. The results are statistically significant at the 1 per cent level. In other words, when a mine opens nearby, an individual's likelihood of moving out of upper income poverty increases by 3.0 per cent, *ceteris paribus*. Column 3 considers the impact on employment. The results show that for individuals located within 10km of a mine, the probability of gaining employment statistically improves by 3.0 per cent. (See Table 69 in APPENDIX B for results at the 30km threshold).

These findings align with Aragón & Rud (2013, 2016), who demonstrate positive impacts of industrial mining as a local demand shock, provided that positive spillovers outweigh negative environmental impacts. This study takes a step further by examining Mwt concerning mine openings (Mwt changes from 0 to 1), and by mine closing (Mwt changes from 1 to 0).

12.6.2. Disaggregating Mwt by mine opening and closure

It is important to disaggregate the effect of mine opening and mine closing to ascertain whether the results are driven by mine opening or mine closure¹²⁴.

Table 40 – Mine opening and closing by ward

	1996	2001	2011
Opening 10km	n/a	51	26
Closing 10km	n/a	123	14

Source: Author.

Note that the figures represent the number of wards experiencing local mine openings or closures, not the number of mines.

¹²² Note that the estimation procedure drops $P_{w,t}$ as a control variable because it is collinear with $P_{w,t} \times M_{w,t}$.

¹²³ The baseline specification controls for important person variables such as age, race, and education. Ward level controls include access to electricity and water, as well as share of traditional and informal dwelling (see APPENDIX B). These controls remain robust throughout different specifications, and reveal expected associations with outcomes variables, such as the role of race in explaining poverty incidence.

¹²⁴ To do this, the study created new variables: mine opening (when Mwt is changing from 0 to 1) and mine closing (m from 1 to 0) and estimated the specification on the full sample.

Table 41 – The impact of mine opening/closing on income poverty and employment

	(1)	(2)
	Upper Poverty	Employed
$M_{w,t} \text{ open} \leq 10\text{km}$	-0.00358 (0.00657)	-0.000552 (0.00750)
$M_{w,t} \text{ closure} \leq 10\text{km}$	0.0208** (0.00920)	-0.0167* (0.00914)
Constant	1.496*** (0.142)	-0.492*** (0.145)
Ward fixed effects	Yes	Yes
District x Year fixed effects	Yes	Yes
Observations	19,109,159	19,109,159
Mean of y	0.644	0.315

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The results highlight the significant impact of mine closures. Disentangling Mwt shows that mine closures notably exacerbate poverty and diminish local employment. This implies that a transition from 1 to 0 (mine closure in a single-mine area) leads to increased poverty and reduced employment probability. Specifically, when a mine closes, an individual within 10km of that mine experiences a 2.1 per cent rise in income poverty incidence and a 1.67 per cent decline in employment likelihood. This underscores that investment failures leading to closures or end-of-life mine scenarios can have adverse socioeconomic consequences for local communities. This result will be revisited when exploring the intensive margin, which involves areas with multiple mines. (See APPENDIX B Table 70 for results at the 30km threshold).

12.6.3. By Commodity-specific impact of local mining

Despite residing in predominantly rural mining provinces characterised by high levels of deprivation, individuals in mining regions show enhanced prospects of escaping poverty and securing employment, as indicated by the results.

This section expands the examination of mining's overall impact by breaking down impacts according to commodity type. Differences in impact are expected due to varying production requirements among commodities. For instance, diamond mining may have lower employment due to concentrated, shallow deposits, unlike commodities such as coal and platinum. Infrastructure and input needs also vary for each commodity (Claassen, 2016), accompanied by distinct policy approaches for each sub-sector. Coal, for instance, being a strategically important domestic commodity, exhibits more localised value chains compared to export-oriented commodities like platinum and gold.

Table 42 – Impact on poverty and employment by commodity within mining areas

$M_{w,t} \leq 10\text{km}$	Upper Poverty (A)		Net coefficient (Poverty)	Employment (B)		Net coefficient (Employment)	Treated wards	Non-treated wards
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$M_{w,t}$	$P_t \times M_{w,t}$		$M_{w,t}$	$P_t \times M_{w,t}$			
(1) Platinum	-0.0314*** (0.0121)	0.00867 (0.0189)	-0.0227 (0.0163)	0.0303** (0.0118)	0.00452 (0.0199)	0.0348** (0.0176)	184	461
(2) Gold	-0.0276*** (0.0103)	-0.0255 (0.0321)	-0.0530* (0.0331)	0.0281*** (0.0101)	0.0449 (0.0332)	0.0730** (0.0337)	114	789
(3) Chrome	-0.0243** (0.0110)	-0.0436** (0.0173)	-0.0679*** (0.0167)	0.0336*** (0.0110)	-0.0193 (0.0153)	0.0143 (0.0144)	88	145
(4) Copper	-0.0286*** (0.0106)	-0.0435 (0.0290)	-0.0721*** (0.0289)	0.0314*** (0.0105)	-0.00249 (0.0266)	0.0289 (0.0266)	26	174
(5) Feldspar	-0.0318*** (0.0111)	0.0357** (0.0177)	0.0039 (0.0145)	0.0287*** (0.0107)	0.0392 (0.0290)	0.0679*** (0.0277)	40	158
(6) Antimony	-0.0251** (0.0104)	-0.0750 (0.0552)	-0.1001* (0.0541)	0.0253** (0.00982)	0.105 (0.0725)	0.1302* (0.0717)	4	198
(7) Diamond	-0.0294*** (0.0107)	0.000511 (0.0374)	-0.0289 (0.0358)	0.0305*** (0.0106)	0.0366 (0.0378)	0.0671* (0.0363)	82	171
(8) Coal	-0.0345*** (0.0105)	0.0250 (0.0206)	-0.0096 (0.0207)	0.0346*** (0.0116)	-0.0158 (0.0167)	0.0188 (0.0151)	95	209
(9) Phosphorus	-0.0304*** (0.0106)	0.0217 (0.0297)	-0.0087 (0.0301)	0.0334*** (0.00987)	-0.0433 (0.0514)	-0.0098 (0.0528)	44	113
(10) Vanadium	-0.0306*** (0.0105)	0.0669*** (0.0251)	0.0363 (0.0255)	0.0318*** (0.0105)	-0.0287* (0.0171)	0.0031 (0.0177)	27	135

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include Ward fixed effects, and District x Year fixed effects. Note that where there are coefficients dropped, there is insufficient variation. The regressions are carried out using the full sample where $N = 19,109,159$

Table 42 presents estimation outcomes by commodity type, revealing nuanced impacts of mines on local communities based on the type of commodity. Commodities differ in scale, labour intensity, procurement localisation, and market focus. Notably, the three major metals—platinum, gold, and chrome—demonstrate varying impacts. Platinum and gold enhance employment prospects, while gold and chrome alleviate poverty. Focusing on platinum, the commodity price surge raises the likelihood of a working-age individual gaining employment by 3.4 per cent at the five per cent level of significance, *ceteris paribus*. Diamonds, feldspar, and antimony positively influence employment chances, while copper reduces poverty. Coal, although locally significant, does not exhibit significant net impacts. Notably, platinum, gold, and chrome drive the positive overall results (Refer to APPENDIX D, Table 78 for the list of commodities wherein most people are located).

In conclusion, residing in platinum, gold, and chrome areas enhances employment opportunities and reduces income poverty as defined by the poverty line. These commodities significantly contribute to the overall outcomes. The data set mainly comprises two major groups: metals (e.g., platinum, gold, copper) and non- or semi-metals (e.g., phosphorus, antimony). Metal ore areas substantially reduce poverty compared to non-metal ore areas, where impacts are negligible. Metal ore areas also prove to be net employment generators. (See APPENDIX D, Table 80 for results at 30km).

12.7. SECTION B – Impact of the commodity price boom

This section examines the influence of mining on local poverty and employment while considering the role of fluctuating commodity prices.

12.7.1. The impact of the commodity price boom

Table 43 – Impact of the commodity price boom on local poverty and employment

	(1) Upper Poverty	(2) Employed
$M_{w,t} \leq 10km$	-0.0214 (0.0221)	0.0448** (0.0226)
$P_{w,t} \times M_{w,t} \leq 10km$	-0.00166 (0.00356)	-0.00281 (0.00364)
Constant	1.507*** (0.142)	-0.505*** (0.144)
Ward fixed effects	Yes	Yes
District x Year fixed effects	Yes	Yes
Observations	19,109,159	19,109,159
Mean of y	0.644	0.315

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 43 documents the results of the impact of the commodity price boom. Regarding the extensive margin, changes in prices do not significantly influence changes in poverty but do exhibit a slight net positive impact on employment (column 2). This result will be further disaggregated below. (See Table 72 in APPENDIX B for results using alternative distance thresholds). It is plausible that the commodity price boom's impact is more pronounced in areas hosting multiple mines (intensive margin).

12.7.2. The impact of the price boom disaggregated by mine opening and closure

Table 44 – The impact of the price boom disaggregated by mine opening and closure

	(1) Upper Poverty	(2) Employed
$M_{w,t} \text{ open} \leq 10\text{km}$	-0.0161* (0.00939)	0.0287* (0.0164)
$P_{w,t} \times M_{w,t} \text{ open} \leq 10\text{km}$	0.0030 (0.0018)	-0.00707** (0.00335)
$M_{w,t} \text{ closure} \leq 10\text{km}$	-0.0389 (0.0248)	-0.0464** (0.0223)
$P_{w,t} \times M_{w,t} \text{ closure} \leq 10\text{km}$	0.0110*** (0.00417)	-0.0117*** (0.00381)
Constant	1.490*** (0.142)	-0.486*** (0.144)
Ward fixed effects	Yes	Yes
District x Year fixed effects	Yes	Yes
Observations	19,109,159	19,109,159
Mean of y	0.644	0.315

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 44 provides estimation results for the impact of price changes when categorised by mine opening and closure. Concerning poverty, commodity price-related mine closures notably exacerbate poverty. Therefore, mining closures drive up poverty rates. In terms of employment, mine openings associated with price changes decrease employment opportunities, although the net impact could be positive during price booms. Conversely, mine closures hinder employment creation opportunities. These findings align with theoretical expectations.

12.8. SECTION C – Intensive margin: additional impact if mine already exists

This section explores the impact of the intensity or size of nearby mining, particularly focusing on cases where a mine already exists in the area. Since some wards have multiple mines, the changes due to the opening and closure of mines might not alter the mining activity indicator directly. However, considering the outcomes so far, it is reasonable to expect that the scale of local mining activity matters. Wards with larger mines or a greater number of mines are likely to experience more significant local impacts. To investigate this, the following tables use the count variable $C_{w,t}$ described earlier.

12.8.1. The intensive marginal mining impact on poverty and employment

Table 45 – The intensive marginal mining impact on poverty and employment

	(1) Upper Poverty	(2) Employed
$M_{w,t} \leq 10\text{km}$	-0.0226** (0.0105)	0.0220** (0.00994)
$C_{w,t} \leq 10\text{km}$	-0.0116** (0.00466)	0.0160*** (0.00393)
Constant	1.498*** (0.144)	-0.490*** (0.146)
Ward fixed effects	Yes	Yes
District x Year fixed effects	Yes	Yes
Observations	19,109,159	19,109,159
Mean of y	0.644	0.315

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 45 presents the additional effect of opening or closing a mine in areas with existing mines (i.e., $\beta_1 + \beta_2$). As expected, the results suggest that mining activity significantly reduces the incidence of poverty when the intensive margin is taken into account. Similarly, mining activity significantly increases employment (see Table 74 in APPENDIX B for alternative distance thresholds). Further disaggregation by mine opening and closure is necessary to understand the underlying drivers.

12.8.2. The intensive marginal mining impact disaggregated by mine opening and closure

Table 46 – The intensive marginal mining impact disaggregated by mine opening and closure

	(1) Upper Poverty	(2) Employed
$C_{w,t}$ opening \leq 10km	-0.0139** (0.00589)	0.00938** (0.00471)
$C_{w,t}$ closing \leq 10km	0.00500 (0.00333)	-0.00797** (0.00384)
Constant	1.492*** (0.144)	-0.483*** (0.146)
Ward fixed effects	Yes	Yes
District x Year fixed effects	Yes	Yes
Observations	19,109,159	19,109,159
Mean of y	0.644	0.315

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 46 presents the results of mining intensity disaggregated by mine opening and closure. In terms of poverty, the results suggest that when multiple mines are present, the closure of mines has no significant effect, while additional mine openings tend to reduce poverty (intensive margin). Notably, in areas where several mine closures have occurred, mine openings appear to be a significant source of income poverty alleviation in the surrounding areas. This outcome might differ by commodity; areas experiencing more mine closures than openings could see a rise in local income poverty. In terms of employment, the findings remain consistent. Mine openings increase the probability of individuals gaining employment within 10km, compared to those farther away, while mine closures reduce the chances of employment creation. (Table 75 in APPENDIX B shows the results using alternative distance thresholds).

12.8.3. The intensive marginal mining impact and the price boom impact on poverty and employment

Table 47 – The intensive marginal mining impact and the price boom impact on poverty and employment

	(1) Upper Poverty	(2) Employed
$C_{w,t} \leq 10km$	-0.0106** (0.00416)	0.0220*** (0.00801)
$P_{w,t} \times C_{w,t} \leq 10km$	-0.000786 (0.00111)	-0.000943 (0.00153)
Constant	1.488*** (0.145)	-0.483*** (0.146)
Ward fixed effects	Yes	Yes
District x Year fixed effects	Yes	Yes
Observations	19,109,159	19,109,159
Mean of y	0.644	0.315

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 47 presents results for mining intensity and price changes. The outcomes suggest that, on a net impact basis, the commodity price boom has a poverty-alleviating effect in areas with multiple mines, and it contributes to employment creation in these areas. This finding is consistent with the previously established results. (See Table 76 in APPENDIX B for results based on alternative distance thresholds).

In summary, the results have been consistent and are summarised as follows:

Extensive margin

- By $M_{w,t}$: individuals living within 10km of mines become less income poor than those living farther. The results show that for individuals located within 10km of a mine, the probability of gaining employment statistically improves by 3.0 per cent.
- By opening/closing: Disentangling Mwt shows that closure of mines has a significant effect in exacerbating poverty and reducing local employment levels.
- By commodity: Of the three biggest metals – platinum, gold, and chrome – gold and chrome appear to reduce poverty, while platinum and gold create employment. In net

impact terms, coal does not have a significant impact, though this result would likely be different when looking at the intensive margin.

Extensive margin and the price boom

- (d) In terms of the extensive margin, the price changes do not have a significant impact in changing poverty but have some net positive impact on employment.
- (e) In terms of poverty, mine closures that are associated with the commodity price changes significantly exacerbate poverty. Mine closures decrease chances of employment creation.

Intensive margin

- (a) By $M_{w,t}$: mining activity significantly reduces the incidence of poverty when the intensive margin is taken into account. Similarly, mining activity significantly increases employment.
- (b) Mine closure has no significant effect on poverty when multiple mines are present, while additional mine openings tend to reduce poverty .
- (c) Mine openings increase the probability of individuals gaining employment within 10km, while mine closures reduce the chances of employment creation.
- (d) The role of the commodity boom is poverty alleviating in areas that have several mines, and it is employment creating.

12.9. Main Results C: Robustness checks

This section undertakes robustness checks, to rule out the possibility that the results are driven by factors other than mining. To achieve this, the section unsuccessfully attempted to implement the instrumental variable strategy. This procedure will be revisited in post-doctoral work. Instead, the section considers alternative specifications and price proxies, as well as clustering standard errors at different levels.

12.9.1. Alternative specifications

Following literature that applies similar empirical strategies to isolate the impact of mining, this subsection undertakes additional checks to exclude the possibility that the results are driven by misspecification. The following is implemented. First, the standard regression is rerun by taking individual level weighting explicitly into account to see if this changes the results. Second,

following Aragon and Rud (2013), $M_{w,t}$ is replaced with continuous distance, with the hypothesis that significance will dissipate. This would support the case that in reality, the opening or expansion of a mine creates local exposure that dissipates with distance. Third, the poverty variable is a function of the income variable. This is taken into account to directly check how incomes in mining areas are impacted, and whether statistical significance remains. Finally, the study relies on the metal price index as a proxy for the price boom. An alternative proxy could be the gold price, which is also internationally determined, with South Africa having little to no influence on the price given its waning gold mines.

Table 48 presents the results. Taking account of person weighting (columns 1 and 2) to run the baseline specification does not change the results. When using continuous distance to account for the impact of mining, the variable loses significance (column 3). Replacing the categorical income variable as an outcome variable (see Table 80 for its composition), the results remain consistent (column 5). To evaluate whether the results were purely driven by price, column 6 shows that the log of gold price retains the same results.

Table 48 – Table of alternative specifications: weighting, distance, price proxy and alternative y variable

	(1) Upper Poverty	(2) Upper Poverty	(3) Upper Poverty	(4) Income	(5) Income	(6) Upper Poverty
	<i>Person weighted</i>	<i>Person weighted</i>	<i>Continuous distance</i>	<i>Alternative y variable</i>	<i>Alternative y variable</i>	<i>Price proxy</i>
$M_{w,t} \leq 10\text{km}$	-0.0222*** (0.00877)	-0.0224 (0.0220)		-0.0332*** (0.00354)	0.175*** (0.0153)	-0.0896*** (0.00347)
$P_{w,t} \times M_{w,t} \leq 10\text{km}$		-0.00162 (0.00351)			-0.0525*** (0.00379)	
Distance			-0.00000856 (0.0000216)			
<i>Gold</i> $P_{w,t} \times M_{w,t} \leq 10\text{km}$						0.0127 (0.0541)
Constant	1.224*** (0.00121)	1.522*** (0.00121)	1.219*** (0.00138)	2.410*** (0.00526)	2.415*** (0.00528)	1.223*** (0.00113)
Ward fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
District x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,440,143	19,440,143	19,440,143	19,440,143	19,440,143	19,440,143
Mean of y	0.636	0.636	0.636	2.364	2.364	0.641

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

12.9.2. Placebo, clustering, and different estimation procedure

The checks under this section are discussed at length in APPENDIX C. The placebo attempts to rule out a possibility that the results are driven by the construction of the distance variable. As such, an experiment is undertaken to create a “placebo” distance variable in order to rerun the regressions. The results in Table 77 (APPENDIX C) lose significance, confirming that the construction of distance was not a fictional or coincidental creation.

Incorrect standard errors violate the assumption of independence, and may lead to standard errors that are smaller than regular OLS standard errors and misleadingly small p-values (Colin Cameron & Miller, 2015). To rule out this concern, standard errors are clustered at the municipal level. The results remain significant and maintain the same signs as the main findings.

Finally, an alternative specification for such a study would be the panel logistic function with fixed effects. The merits and limits are discussed in APPENDIX C. Even when running the specification using this estimation procedure, the results remain consistent.

12.10. Alternative explanations, limits, and future improvements to the study

12.10.1. Alternative explanations

It may be possible that the preceding sections’ findings only capture factors other than mine activity that explain the fall in the share of poverty. The following discusses the possibility of increased tax revenue and selective migration as alternative explanations for the results.

12.10.1.1. Tax revenue explanation

Generally, local governments receive tax revenue from local operating mines, in which case the impact of mining may run through this channel. For example, there could be an expansion of public employment, which could lead to increased local wages, or a demand shock from increased public works (Aragón & Rud, 2013). The following two reasons make it unlikely that the preceding results capture this channel. Firstly, the analysis of this study is at the ward level. Tax is collected at the national level, and rates at the municipal level. Municipalities have a strict mandate to allocate tax revenue equitably, prioritising poorer areas.

In this case, the results should not have found economic benefit from mining activity that occurs only within the 10 kilometre distance of exposure. This is because municipalities consist of wards spreading beyond the 10 kilometre threshold. Therefore, given the policy mandate, there is no reason that tax revenue expenditure would be confined to wards with mining. On the contrary, the poorer areas are likely to benefit more from this tax. Unfortunately, this study cannot formally evaluate this possibility, because of the dataset's limitations.

12.10.1.2. Selective Migration

Before a mine is established, it is necessary to undertake processes concerning approvals from government and community stakeholders. Generally, these take more than a year to complete. The anticipation of a mine opening could alter the composition of the local population through selection. It is not known whether the opening of a mine leads to positive or negative migration. Nonetheless, compositional changes of the population, if significant, affect poverty and employment levels. It may be that in anticipation of the opening of a mine, the poorer move closer to the mining area while the wealthier move farther away in anticipation of the negative health and migration impacts. This changes community characteristics and biases the true size of the impact of a mining demand shock. Alternatively, the opening of a mine or mine expansion could attract productive labour, which would exert downward pressure on income poverty.

The current dataset is unable to directly address this concern, because of lack of migration data. This is a limitation that requires further exploration at the post-doctoral phase. Notwithstanding, other studies applying the same identification strategy (Aragón & Rud, 2013; Tolonen, 2014; Bazillier & Girard, 2020), also rule out migration as the driver of their results, given the integrity of the identification strategy.

12.10.2. Improvements to the study

12.10.2.1. Data

The main limitation to this study is the availability of data that could provide a richer set of variables. This includes information on prices of local goods, health outcomes, environmental outcomes, and more waves in the panel. For instance, the provinces studied have large agricultural sectors, and a better understanding of the impact of mining on this sector is important.

The option considered for this study to address the above is the National Income Dynamics (NIDS) survey data, which is a national panel study of households in South Africa. The survey is specifically designed to track and understand shifting national socio-economic wellbeing. The NIDS started in 2008 and covers five waves to 2017. Unfortunately, the dataset is only representative at provincial level. Though geocoded data is available with permission, the creators discouraged using the dataset at ward level.

12.10.2.2. Improving the estimation technique

As already mentioned, the next iteration of this study will estimate the model using the innovative contributions related to literature on staggered treatments.

12.10.2.3. Test for pollution using rainfall data

Pollution is one of the main hazardous effects caused by industrial mining. This variable may be valuable as a control to the model specification. Tolonen (2014) uses rainfall indicator interacted with a dummy for an active mine. This method as a measure of pollution effects is justified because the geographic spread of pollutants from mines can increase with rainfall. By merging rainfall maps, this method is feasible for this study in future.

12.11. Conclusion

The impact of industrial mining on local hosting communities in South Africa has long been a contentious and under-researched topic. The country's history is marked by the exploitation and oppression of black people during colonial and Apartheid regimes. Even in the post-Apartheid era, there is no consensus on whether mining has brought significant positive transformation to local communities. The commodity price boom of the 2000s has raised questions about whether these communities truly benefit. To effectively manage future booms, there is a need for quantified insights into the socio-economic impacts of mining at the local level.

This research aimed to address this gap by utilising a large, representative census sample of about 20 million observations across five major mining provinces from 1996 to 2011. By merging this data with information about mines and world commodity prices, the study aimed to isolate the impact of mine expansion on local income poverty and employment outcomes. The research used three sources of variation to achieve this.

The provisional findings of the research span from general to nuanced conclusions. Generally, the opening of a mine increases the likelihood of individuals moving out of income poverty and gaining employment in the local community. The commodity price boom amplifies both the benefits and challenges of mining activity. While the boom contributes to reducing income poverty and increasing employment opportunities in surrounding areas, the employment situation for the broader workforce remains volatile. This volatility raises concerns about the sustainability of economic opportunities beyond boom periods.

Considering variations by commodity, the study suggests that different metals have varying impacts. Gold and chrome mining appear to reduce poverty, while platinum and gold mining create employment. Coal, on the other hand, does not show a significant impact in terms of income poverty or employment, although the situation might differ when considering more specific measures.

Future iterations of this study will aim to improve the robustness of the estimation method, using recent literature on staggered treatment in difference-in-differences.

The study concludes that focusing solely on income poverty and employment is important but insufficient to fully capture the trade-offs of mining at the local level. The overall impact of mining on local poverty and employment hinges on the balance between positive economic linkages and multiplier effects versus the negative spill-over effects from mining activities. A key policy recommendation is to enhance the positive impacts of mining through strategies that channel increased incomes and employment during boom periods into education, skills development, local accountability mechanisms, and economic diversification. This endeavour requires a collective stakeholder partnership, as it involves land and people beyond the responsibility of mining companies alone.

CHAPTER 13 – Relief or additional curse: the discovery of minerals in former homelands and the impact of the 2000s commodity price boom, 1970-2011

Abstract

This chapter delves into the effects of the policy of Separate Development, which led to the creation of homelands, and the coincidental discovery of mineral resources within and around these areas. The question arises whether the discovery of minerals and subsequent mining activity, particularly during the commodity price boom of the 2000s, brought relief or exacerbated existing challenges. Despite the significance of this issue, there's a notable absence of empirical studies that thoroughly analyse and explain the impact of industrial mining on poverty and employment within these regions. The Marikana massacre, where 34 mine workers were killed during strike action, underscores the ongoing debates surrounding mining's role in local communities, particularly those located near former homelands. Despite efforts to transform mining into an uplifting economic activity for these communities, persistently high levels of poverty endure.

By drawing on existing literature and census data spanning from 1970 to 1991, this study provides an overview of the historical context of poverty within the former homelands. It emphasises the creation of homelands through the policy of Separate Development as a central factor contributing to entrenched structural poverty and elevated unemployment rates. The study takes on an empirical approach, utilising individual-level census data from 1996, 2001, and 2011, combined with geocoded mining information.

The analysis involves a comparison between mining wards situated within former homelands and those located outside of these areas. The findings reveal consistent disadvantages for individuals residing in former homeland regions. While industrial mining activity generally leads to a reduction in local income poverty and an increase in employment opportunities, these positive effects are diminished within the homeland areas. Further exploration into variations within homelands uncovers localised mining developments, such as in the Venda homeland area, where

individuals residing in mining wards within homelands experience improvements in poverty and employment due to mining activities. Nevertheless, the study raises concerns about the volatility of employment levels, which tend to respond to fluctuations in commodity prices.

NOTE: This chapter is a continuation of the previous one and heavily relies on its findings. As such, certain sections included in the preceding chapter have been omitted from this one to avoid redundancy. The primary contribution of this chapter is to offer a historical investigation that enhances the understanding of the persistently high levels of poverty and unemployment in rural mining areas of South Africa. Additionally, it examines the intricate role of industrial mining in this complex narrative.

13.1. Introduction

South Africa grapples with persistent high levels of poverty, particularly within its mineral-rich rural areas. These pockets of poverty are intrinsically linked to the history of black enclaves, known as homelands, created under the apartheid policy of Separate Development. This policy entailed forcibly relocating millions of black South Africans from designated "white" areas to "African reserves" or homelands (Baldwin, 1975).¹²⁵ This practice, initiated by British colonialists underpinned by laws like the 1913 Native Land Act, established a system of systematic racial segregation.

The National Party's rise to power in 1948 intensified these efforts, driven by apartheid ideology. The policy led to the establishment of ten "self-governing Homelands" to segregate the majority black population from the white political system, preserving cheap labour for industrial expansion, especially in mining and energy.

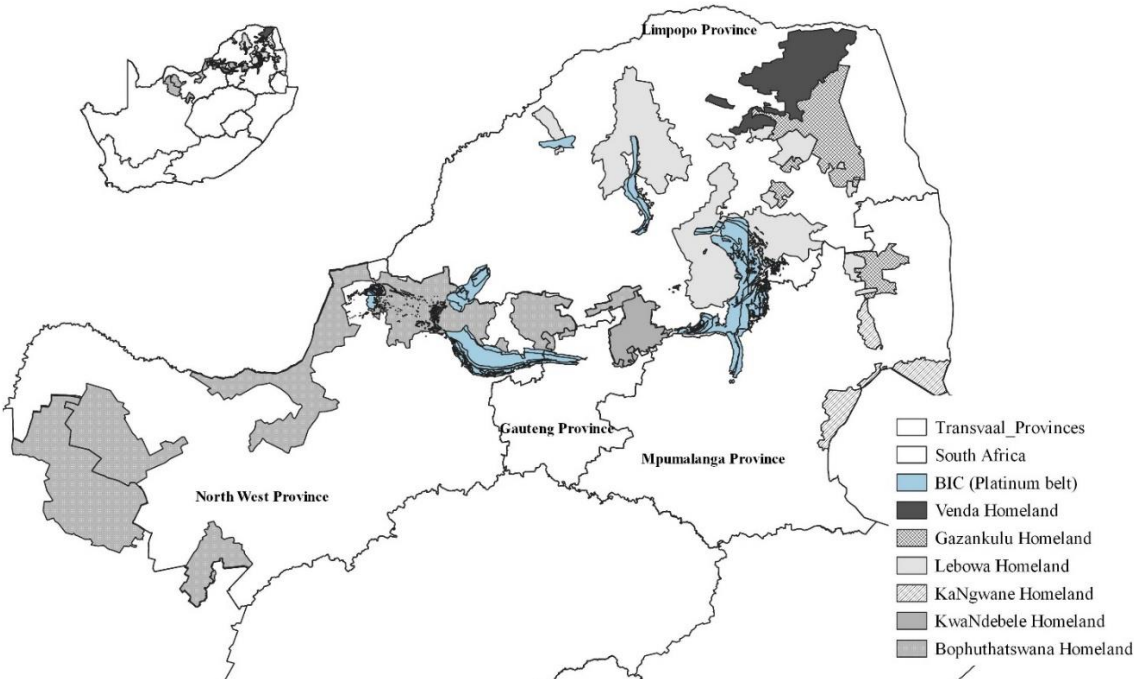


Figure 49 – Homelands in the region of the former Transvaal province, South Africa
Source: Author.

¹²⁵ This study will use the terms “homelands” and “former homelands” interchangeably. If referring to post-1994 South Africa, the correct term is “former homelands”. Similarly, the study will also refer to “non-homeland” areas, meaning areas that never were homelands throughout history. “Wards”, “areas”, and “communities” are also used interchangeably, but the technical term is “municipal wards”.

A significant coincidence was the discovery of vast mineral deposits in these homeland areas, primarily platinum, situated in what are now Limpopo, Mpumalanga, and North West provinces (Figure 49). The critical question arises whether the mining activities that followed, especially during the commodity price boom of the 2000s, alleviated poverty or exacerbated it.

Mining should not replace broader industrial development, but despite legislative efforts to uplift communities through mining, poverty remains widespread. The creation of homelands was closely linked to supplying cheap black labour, especially to mining, perpetuating the exploitation and marginalisation of black individuals.

The resource curse theory suggests that mining's presence in former homelands might worsen poverty due to the enclave effect – the idea that mining companies may not foster local economic linkages. Negative impacts like soil degradation, environmental damage, and health issues can persist without local economic benefits. However, substantial mining development occurred in these areas during the 2000s, coinciding with widespread mineral rights sales and a global commodity price boom (see Nxele, 2022).

This chapter examines the intersection of homelands and mining's impact. Did the development and expansion of mining in former homeland areas compound the enclave effect, or did it mitigate poverty and unemployment? Addressing these questions contributes to a nuanced understanding of the interaction between homeland policy effects and mining.

Using South African census data, this chapter has three aims. First, it contextualises the role of homelands in historically high poverty and unemployment rates through literature review and census data analysis (1970, 1980, 1991). Second, it empirically studies mining's role in former homelands from 1996 to 2011, using merged census data of 19 million observations and information from over 400 mines. This aims to move beyond correlations to causation. The third objective is to move beyond a collective analysis of homelands and provide empirical findings for each homeland, potentially serving as case studies for future research.

The third objective is to go beyond studying homelands as a collective, homogenous entity, and instead to provide some empirical results for each homeland that could initiate case studies for future research.

Comparing mining wards inside and outside homelands, the study reveals persistent disadvantages for those within former homeland areas.¹²⁶ While industrial mining reduces local income poverty and increases employment chances, these positive effects are subdued within homelands. Substantial mining development within specific homelands, such as Lebowa and Venda, results in significant poverty reduction and employment opportunities.

The rest of the chapter unfolds as follows: Sections 13.2 and 13.3 explore the history of homeland creation and mineral discovery. Section 13.4 touches on theoretical underpinnings of Separate Development. Section 13.5 outlines the empirical approach and data. Sections 13.6 and 13.7 present empirical findings. Finally, section 13.8 concludes the chapter.

13.2. Building Enclaves: The creation of poverty and the development of mining in South Africa

To understand the enduring poverty and unemployment within former homelands, as well as the effects of mining, it is essential to explore this relationship historically. Examining the history from the early 1970s will bolster the enclave thesis of mining within former homelands, enabling an investigation into the extent of integration of mining into economic development in these communities. This section elucidates the origins of high poverty and unemployment levels and delves into the emergence of the mining-community dynamic within former homelands.

Before 1994, most of the provinces under study did not exist as provinces; they were comprised of distinct "homelands" or "Bantustans" located within "white-reserved South Africa." These homelands were designed as autonomous states for black populations, separated from the Republic of South Africa.¹²⁷ These areas were allocated as less valuable territories, and their establishment was rooted in removing the black population from white areas (Manson, 2013). This process

¹²⁶ Wards are local level geopolitical boundaries used for electoral purposes and accountability. They are smaller than local municipalities. Each local municipality is subdivided into several wards. A "mining ward" is a ward that contains one or more mines.

¹²⁷ Refer to Butler, Rotberg, & Adams (1978) for a history of the homelands.

yielded densely populated enclaves within South Africa. (See Table 84 in APPENDIX F for changes in population numbers).

Economic reliance on the Republic of South Africa was common due to underdevelopment and limited opportunities within the homelands. Migrant labour provided a major source of income, with most economic activity occurring outside the homelands. The homeland governments lacked the ability to tax white businesses or mines operating within their boundaries, further contributing to their economic dependency (Butler, Rotberg &, 1978).

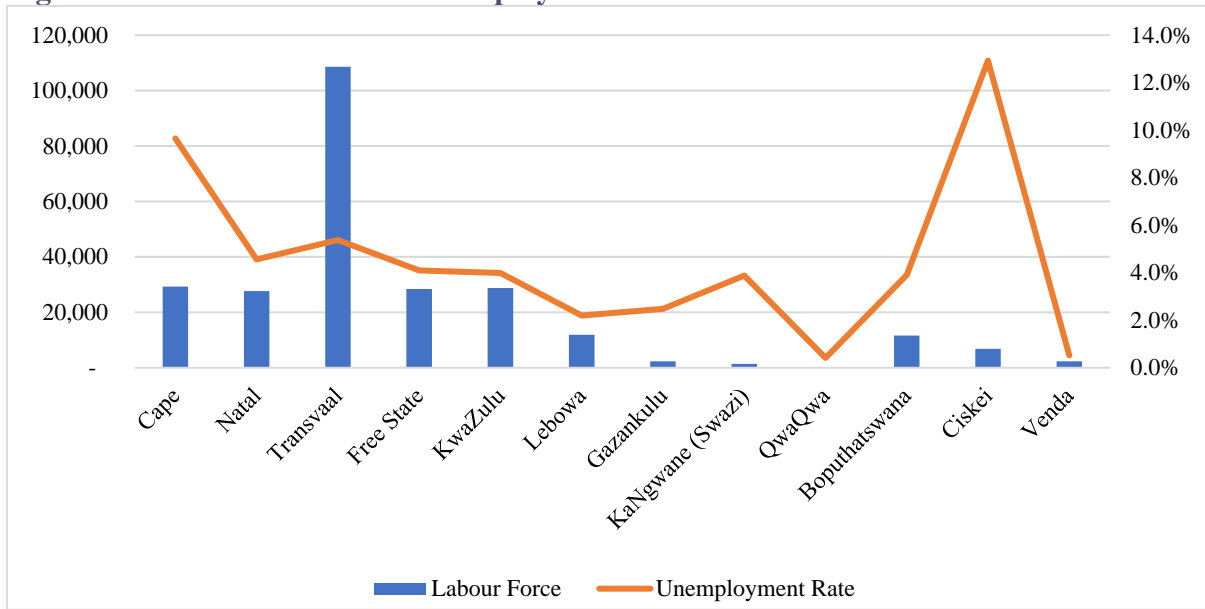
Table 49 – Annual income of provinces and homelands, census 1991

Province/Homeland	No income	Below R1000	R1000 to R4999	R5000 to R14999	R15000 to R49999	R50000 to R149999	R150000 +	Unspecified
Cape	0.54	0.03	0.16	0.13	0.10	0.02	0.00	0.01
Natal	0.52	0.03	0.15	0.13	0.12	0.03	0.00	0.01
Transvaal	0.47	0.03	0.14	0.15	0.14	0.05	0.00	0.02
Free State	0.54	0.06	0.14	0.16	0.07	0.02	0.00	0.01
KwaZulu	0.82	0.03	0.09	0.04	0.01	0.00	0.00	0.01
Lebowa	0.85	0.02	0.07	0.04	0.02	0.00	0.00	0.01
Gazankulu	0.84	0.03	0.07	0.03	0.02	0.00	0.00	0.01
KwaNgwane	0.81	0.03	0.08	0.05	0.02	0.00	0.00	0.01
QwaQwa	0.67	0.05	0.15	0.08	0.04	0.01	0.00	0.01
KwaNdebele	0.78	0.02	0.10	0.07	0.02	0.00	0.00	0.01
Bophuthatswana								
Ciskei	0.77	0.03	0.15	0.04	0.00	0.00	0.00	0.01
Venda	0.83	0.01	0.11	0.03	0.02	0.00	0.00	0.00

Source: Statistics South Africa Census 1991

Table 49 provides a snapshot of annual income statistics for provinces and homelands in 1991. Notably, more than 80 per cent of populations in five homelands earned no income. (See Table 85 in APPENDIX F for more information).

Figure 50 – Labour force and unemployment rate across homelands 1970



Data source: Statistics South Africa census 1970

Figure 50 illustrates labour force and unemployment rates across homelands in 1970, depicting the scarcity of employment opportunities within homeland areas. The official census, however, classified a significant portion of the homeland population as "not economically active."

13.3. The discovery of minerals

Among the nine South African provinces, the five poorest ones are located within former homelands. These territories were allocated to black people during the forced removals following South Africa's formation in 1910. Notably, these areas were delineated as homelands before the discovery of substantial mineral deposits. By the 1920s, it was evident that large segments of these homelands, including portions purchased by black communities like the Bafokeng, contained valuable platinum group metal deposits. These deposits were primarily found within the Bushveld Igneous Complex, spanning Limpopo and North West provinces.

However, mining these minerals required substantial capital and specialised extraction techniques, making it impractical for local residents without the necessary resources or skills. By the 1970s, it was clear that the northern homelands harboured significant mineral wealth, although no systematic surveying had been conducted earlier. These homelands held deposits of gold, platinum, copper, coal, iron, and other minerals. Mineral rights were held by the state, tribal

communities, and individuals, but these rights were predominantly allocated to white individuals or companies.

Despite the establishment of the Bantu Mining Corporation, intended to facilitate black and white exploitation of homeland mineral resources, most benefits were directed toward white mining interests. Homelands experienced poor economic linkages with mines, limited employment and income multiplier effects, and minimal forward linkages into processing and fabrication. In 1979, 59 mines operated within homelands, employing around 12,000 black workers, predominantly in the northern region (South African Institute of Race Relations, 1971). See Table 86 in APPENDIX F for prospecting activity. Table 50 shows mines in operation, the associated black employment, and earnings.

Table 50 – Mining activities by private sector during 1979

Homeland	Number of mines in production	Number of Black in employment	Earnings R
Gazankulu	4	225	67 011
Lebowa	21	8 080	11 883 000
Venda	4	303	77 627
Ciskei	3	78	98 036
KwaZulu	16	511	1 046 831
KwaNgwane	6	1 613	1 449 733
QwaQwa	2	38	19 819
KwaNdebele	1	18	4 330
Total	59	11 602	15 203 906
Mining Corporation			
Lebowa	1	458	362 148
Gazankulu	1	278	195 371

Source: South African Institute of Race Relations (1981)

Enclave effects were evident in early mining activities within homelands: (1) Mines were not locally owned, and royalties were not fully controlled by local representatives; (2) Employment creation was limited due to the absence of local supply chains and skills transfers; (3) For employed locals, the majority worked outside the homelands, where they spent their wages. This double enclave phenomenon—homelands functioning as enclaves and mining operating as enclave activities—led to minimal possibilities of local economic improvement. In essence, there were enclaves within enclaves, amplifying the enclave effect's impact.

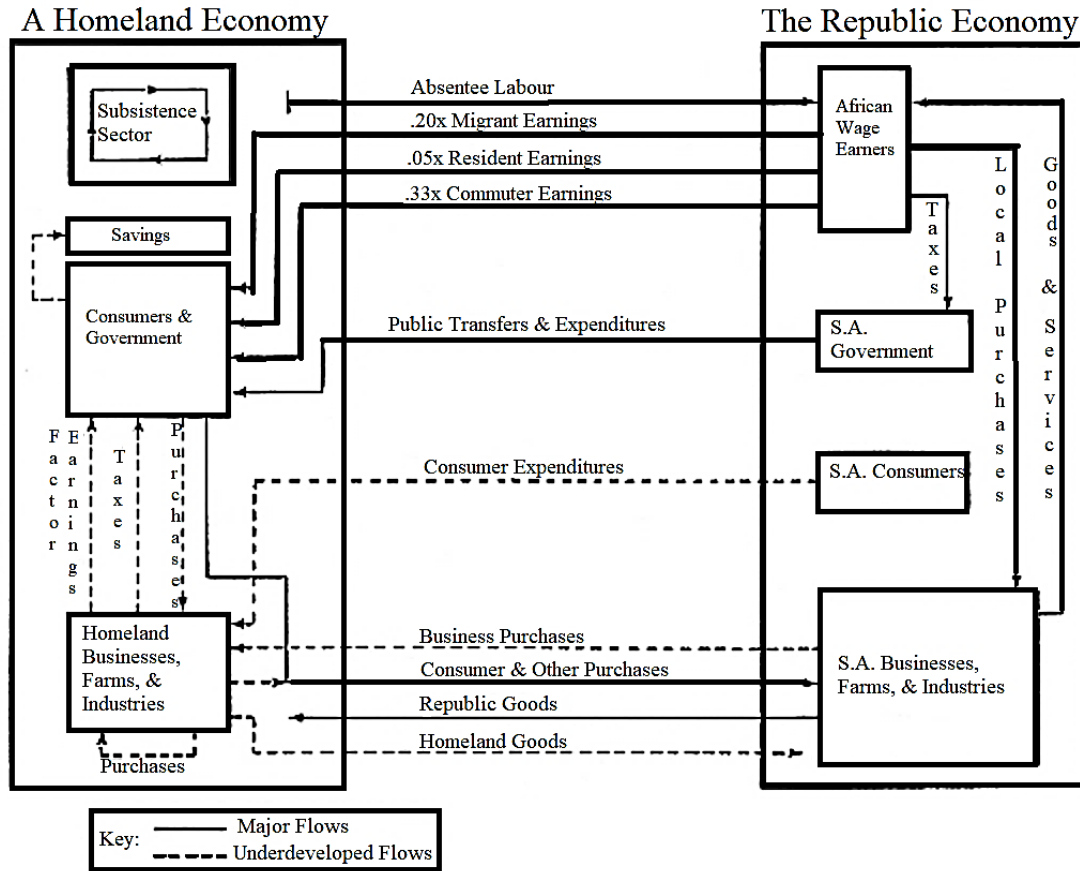
13.4. Theoretical considerations: “Leakages” to “linkages” model

13.4.1. Leakages

In analysing the impact of mines on Bophuthatswana, Butler, Rotberg, and Adams (1978)) found that mines had a minimal effect on local incomes within the homeland. They argued that due to the institutional arrangements at the time, growth in the extractive sector did not significantly contribute to homeland development. Instead, income-generating forces originated outside the homelands, particularly in the Republic of South Africa. This situation led to what they termed the "leakages" model, suggesting that public spending and private investment in the homelands would "leak" back into the South African white economy, generating multiplied effects on income, consumption, savings, and employment within the Republic rather than within the homelands.

The authors presented a flow chart (Figure 51) to visualise the core-periphery dynamic, with solid lines representing major flows and dashed lines depicting underdeveloped linkages. This chart highlighted that labour was a primary export from the homelands, but a significant portion of the earnings was spent in non-African businesses, causing a lack of secondary multiplicative effects within the homelands. Furthermore, capital expenditure occurred outside the homelands, failing to stimulate local enterprise or employment.

Figure 51 – The flows of labour, money, and goods between homelands and the Republic



Source: Butler, Rotberg, & Adams, 1978

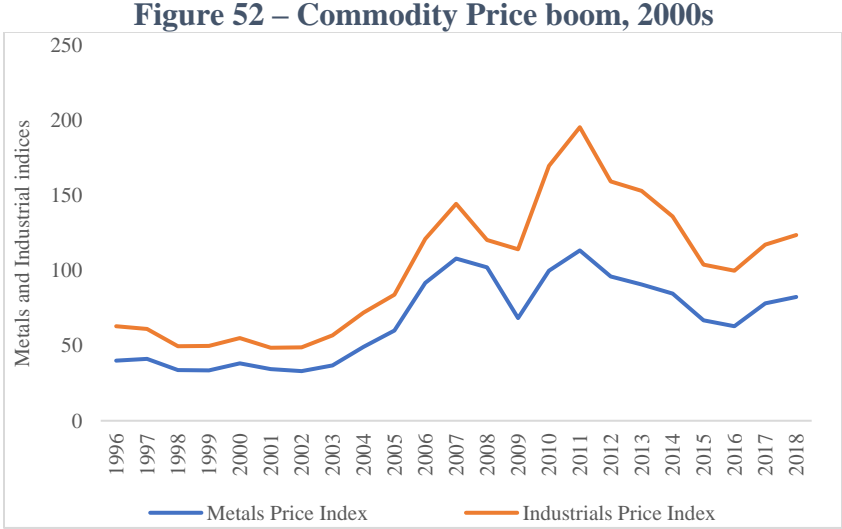
13.4.2.Linkages

The reintegration of homelands into South Africa post-1994 and changes in mining legislation in 2002 aimed at increasing local procurement presented an opportunity to foster localised economic relationships between mining and local communities within former homelands. The shift toward greater local procurement and the 2000s commodity price boom provides an empirical context to assess whether the enclave theory (or "leakages theory") still explains the mining-local economy relationship. This study bridges this gap by offering insights into the evolving role of mining in South Africa's former homeland regions.

13.5. Empirical strategy

13.5.1. Data and identification strategy

This section focuses on empirically investigating the impact of mining within former homeland areas. It accomplishes this by comparing mining areas within homelands to mining areas outside homelands, as well as comparing mining areas within homelands to non-mining areas within homelands. The persistence of underdevelopment in mining areas within homelands, coupled with the prevalence of mining, makes this setting suitable for isolating the causal impact of mining on ward-level poverty and employment outcomes.



Data source: Index Mundi

The analysis employs three main sources of variation: distance from a ward to the nearest mine, changes in commodity prices, and different commodities mined within and between homelands and non-homelands. The study utilises census data from 1996, 2001, and 2011, merged with geocoded mining data. To identify homeland wards, the study combines maps of former homelands from the Department of Environmental Affairs and ward maps from the Municipal Demarcation Board.

The study uses mine openings, closures, and commodity price changes as the treatment variables. Figure 53 and Figure 54 illustrate the identification strategy, plotting the conditional mean of poverty for individuals residing within 10 km of the nearest mine and those farther away in Lebowa and Bophuthatswana homelands, respectively.

Figure 53 demonstrates that individuals living close to mining activities in Lebowa experienced higher poverty rates before 2001 and a sharper decline in income poverty post-2001, indicating a relative improvement due to developing mines. Figure 54 illustrates similar results for the Bophuthatswana homeland, where wards with existing mines displayed lower average poverty, aligning with a pattern of economic benefits associated with mining activities.

Figure 53 – The conditional mean of poverty: Lebowa homeland, Limpopo

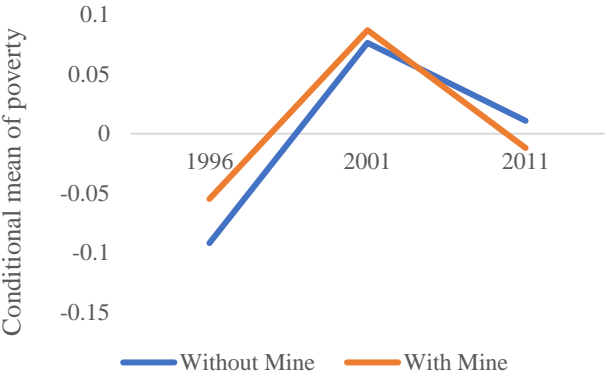


Figure 54 – The conditional mean of poverty: Bophuthatswana homeland, North West

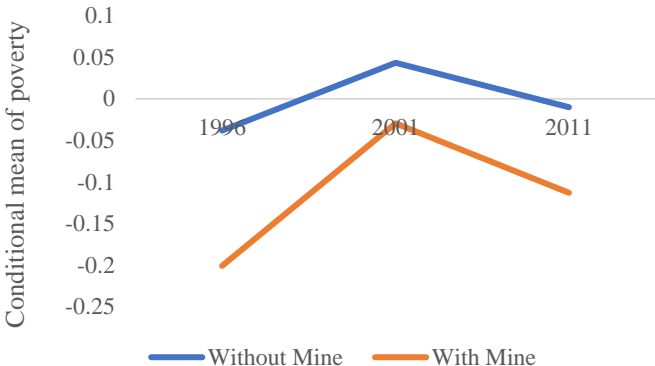


Table 51 – Poverty and unemployment, and mine opening/closing trends between 1996 and 2011

	1996	2001	2011	Detail
<i>All five provinces</i>				
Number of people in homelands	3,881,503	4,156,139	4,468,172	
% People in upper poverty - overall	58%	73%	60%	
% People in upper poverty - homelands	65%	78%	68%	
% People in no income poverty - overall	52%	64%	49%	
% People in no income poverty - homelands	61%	70%	56%	
Non-homelands				
Number of people in non-homelands	3,417,792	2,859,236	4,025,542	
% People in upper poverty – non-homelands	49%	65%	52%	
% People in no income poverty – non- homelands	42%	56%	42%	
Within former homelands & $M_{w,t} = 1$				
Number of people in $M_{w,t} = 1$	2,386,063	2,728,522	2,860,688	
Number of poor people in $M_{w,t} = 1$	1,515,271	2,093,612	1,940,771	
% People in poverty in $M_{w,t} = 1$	0.64	0.77	0.68	
Employment in $M_{w,t} = 1$	0.26	0.22	0.27	
Outside of former homelands & $M_{w,t} = 0$				
Number of people in $M_{w,t} = 0$	618,735	799,801	955,699	
Number of poor people in $M_{w,t} = 0$	322,291	541,164	506,979	
% People in poverty in $M_{w,t} = 0$	0.52	0.68	0.53	
Employment in $M_{w,t} = 0$	0.47	0.36	0.41	
Information on wards and mines in homelands				
Number of homeland wards	900	900	900	
Number of non-homeland wards	924	924	924	
Number of homeland wards in $M_{w,t} = 1$	482	316	345	
Number of non-homeland wards in $M_{w,t} = 1$	490	268	318	
How many homeland wards have mines?	54	41	44	
How many non-homeland wards have mines?	123	73	92	
How many homeland wards have more than one mine?	23	19	21	c.23% average
Max number of mines within a ward	9	8	9	
Average number of mines excluding maximum	2	2	2	
Number of homeland wards in $M_{w,t} = 0$	418	584	555	
Net number of wards exited mining (1996-2001)		166		
Net number of wards entered mining (2001-2011)			29	
Information on mines				
Number of mines in homelands	124	93	107	Net closure
Number of mines in Bophuthatswana	56	47	49	Net closure
Number of mines in Gazankulu	2	2	2	Net zero
Number of mines in KwaNdebele	1	1	1	Net zero
Number of mines in KwaNgwane	6	1	0	Net closure
Number of mines in Lebowa	50	35	53	Net opening
Number of mines in Qwaqwa	37	35	35	Net closure
Number of mines in Venda	9	7	8	

Source: Author, using StatsSA census data 1996-2011.

Following Aragón and Rud (2013), this study employs a threshold distance to distinguish between mining and non-mining wards. The choice of this distance is influenced by two factors. First, the study calculates the average radius of wards in the mining provinces under examination. Except for the Northern Cape province, where wards tend to be spatially large, wards in other provinces average around 10km in radius. Second, previous qualitative research on the impacts of mining in South Africa commonly employs this threshold to define local mining areas (Magak, 2022; Mine Health and Safety Council, 2022). Thus, a distance of 10km will signify mining areas, denoted as $M_{w,t} = 1$. Table 51 presents descriptive statistics for the outcome variables and the relationships between homeland areas and mines within the dataset. These statistics highlight that a significant proportion of individuals reside in former homeland areas within the mining provinces. While poverty and unemployment are prevalent nationwide, they are more pronounced in homeland areas. The presence of several mines is observed in homelands, particularly in Bophuthatswana and Lebowa (see Section 13.7).

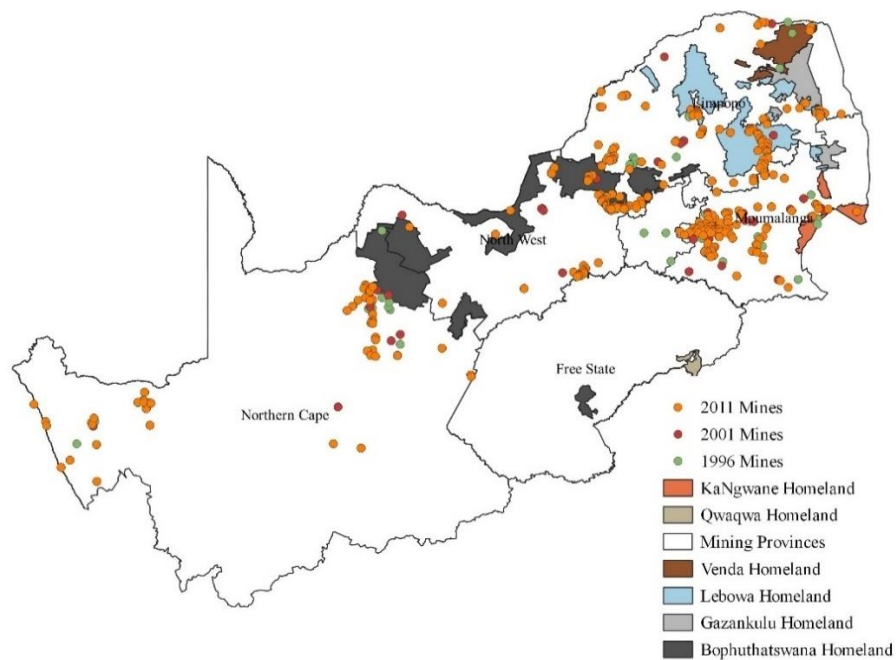


Figure 55 – Map of the homelands and all mines in 1996, 2001, and 2011 under study
 Source: Mapped using QGIS using mining data from USGS and shapefile from ArcGIS

Table 52 offers summary statistics organised by homeland and mining area. The table showcases means and standard errors for outcome variables, individual characteristics, and ward-level characteristics. Additional summary statistics related to mines and commodity prices are available in Table 88, APPENDIX G.

Table 52 – Summary statistics, individual and ward level characteristics

Variables	<i>Homelands = 1</i>		<i>Homelands = 1 & M_{w,t} = 1</i>		<i>Homelands = 1 & M_{w,t} = 0</i>		<i>Homelands = 0</i>		<i>Homelands = 0 & M_{w,t} = 1</i>		<i>Homelands = 0 & M_{w,t} = 0</i>	
	Mean N = 11,276,644	Standard Error	Mean N = 7,975,273	Standard Error	Mean N = 3,301,371	Standard Error	Mean N = 8,163,499	Standard Error	Mean N = 5,789,264	Standard Error	Mean N = 2,374,235	Standard Error
<i>Individual level (working population:15-65)</i>												
Upper poverty	0.71	0.0001	0.7	0.000163	0.74	0.0002	0.55	0.00017	0.54	0.0002	0.58	0.0003
No income	0.62	0.0001	0.62	0.000172	0.63	0.0003	0.46	0.00017	0.46	0.0002	0.46	0.0003
Employment	0.24	0.0001	0.25	0.000153	0.22	0.0002	0.43	0.00017	0.43	0.0002	0.41	0.0003
Age	32	0.0041	33	0.004868	32	0.0076	34	0.0047	34	0.0054	34	0.0089
Sex (Male=1)	0.45	0.00015	0.45	0.000176	0.43	0.0003	0.49	0.0002	0.5	0.0002	0.48	0.0003
Education years	7.5	0.0014	7.4	0.001722	7.7	0.0027	8.9	0.0015	9	0.0018	8.5	0.0028
Race=Black	0.98	0.00004	0.98	0.000047	0.98	0.0001	0.74	0.00015	0.78	0.0002	0.67	0.0003
Race= Coloured	0.0035	0.00002	0.0036	0.000021	0.0033	0.00003	0.1	0.00011	0.072	0.0001	0.17	0.0002
Race=Indian/Asian	0.0021	0.00001	0.0019	0.000015	0.0026	0.00003	0.0065	0.00003	0.0075	0.00004	0.0041	0.00004
Race=White	0.014	0.00004	0.013	0.00004	0.016	0.00007	0.15	0.00012	0.14	0.00015	0.16	0.0002
<i>Ward level (ratios)</i>												
No piped water	0.2	0.00006	0.22	0.000081	0.15	0.00009	0.056	0.00004	0.057	0.00005	0.054	0.00006
No sewerage system	0.86	0.00007	0.86	0.000086	0.86	0.00013	0.35	0.00012	0.33	0.0001	0.39	0.0002
No refuse removal	0.85	0.00009	0.84	0.000105	0.86	0.00014	0.28	0.00011	0.26	0.0001	0.32	0.0002
No electricity lights	0.34	0.00009	0.34	0.00011	0.35	0.00017	0.22	0.00008	0.21	0.0001	0.23	0.00014
Traditional informal dwelling	0.23	0.00006	0.24	0.000071	0.22	0.0001	0.23	0.00008	0.24	0.0001	0.22	0.00013
Total population	11,000	01.1711	10,000	1.36129	12,000	2.1774	9,400	1.7993	10,000	2.26802	7,500	2.33753

13.5.2. Baseline Specification

The study evaluates the impact of mining activity on ward-level poverty and employment using the following regression models :

$$y_{i,w,t} = \beta_0 + \beta_1 M_{w,t} + \beta_2 Z_{i,w,t} + \beta_3 X_{w,t} + \alpha_1 w + \alpha_2 dt + \varepsilon_{i,w,t} \quad (1)$$

$$y_{i,w,t} = \beta_0 + \beta_1 M_{w,t} + \beta_2 (\log P_{w,t} \times M_{w,t}) + \beta_3 Z_{i,w,t} + \beta_4 X_{w,t} + \alpha_1 w + \alpha_2 dt + \varepsilon_{i,w,t} \quad (2)$$

where $y_{i,w,t}$ is the outcome variable. Relating to poverty and employment, $y_{i,w,t}$ is a binary variable equal to 1 if an individual i is income poor (employed) in ward w in year t , and equal to 0 otherwise. $M_{w,t}$ is a binary variable indicating the presence of a mine within 10km of ward w at time t . The main measure of change in the magnitude of mining activity is the commodity price ($\log P_{w,t}$), which is the log of the price of the nearest commodity to a ward¹²⁸. Both $M_{w,t}$ and $\log P_{w,t}$ vary with time due to the opening and closure of mines (e.g., mines of differing commodities). The specification also includes a vector of individual-level controls $Z_{i,w,t}$ and ward-level controls $X_{w,t}$, ward-level fixed effects w , and district multiplied by year fixed effects dt . The main parameters of interest are β_1 and β_2 in equation 2, which capture the size of impact on $y_{i,w,t}$ due to a change in commodity prices, varying by exposure to mining ($M_{w,t}$).

The study employs the LPM estimator as described in Correia (2017, 2019) to estimate the model. Despite the binary nature of the outcome variables, the Correia LPM estimator is chosen due to its efficiency in dealing with large multi-level datasets. This estimator also allows for straightforward interpretation of coefficients.

¹²⁸ In cases where a ward has more than one close mine, the nearest largest mine is selected.

13.6. Main Results – Homelands Versus Non-Homelands

This section presents the estimation results in three parts. Section A provides the baseline specification results, distinguishing between mine openings and closures and commodity types. Section B presents the results showing the impact of commodity price changes. Section C delves into the intensive margin results.

SECTION A – Baseline specification estimation results

This section reports the estimation results of the specification of the model. The development of new mines (or the re-opening of mines) could potentially reduce income poverty and increase employment in former homelands, thus affecting $M_{w,t}$ (0/1) through across wards and time. Alternatively, changes in $M_{w,t}$ could have little effect because of poor local linkages to mining activity in homeland areas. This hinges on whether mining companies have enhanced vertical and horizontal linkages within homelands due to changes in mining policy.

13.6.1. Baseline estimation results comparing homeland to non-homeland areas

Table53 details the effect of industrial mining on homeland and non-homeland areas. COLUMN A compares mining and non-mining wards *within* homelands. In homeland areas, proximity to a mine does not appear to provide significant improvements in moving individuals out of poverty or increasing employment compared to individuals in non-mining homeland wards. This aligns with the historical analysis in Section 13.2 and the economic linkage theory in Section 13.3. Further analysis is required for conclusive insights.

Table 53 - Baseline estimation results: Homelands vs non-homelands

	COLUMN A <i>HOMELANDS</i>		COLUMN B <i>NON-HOMELANDS</i>	
	(1) Upper Poverty	(2) Employed	(3) Upper Poverty	(4) Employed
$M_{w,t} \leq 10\text{km}$	-0.0145 (0.0111)	0.0140 (0.0101)	-0.0408** (0.0192)	0.0388* (0.0208)
Constant	1.273*** (0.106)	-0.530*** (0.133)	1.549*** (0.240)	-0.444* (0.238)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	11,234,396	11,234,396	7,874,763	7,874,763
Mean of y	0.708	0.238	0.552	0.425

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The difference in number of observations between COLUMN A and B is because COLUMN A is restricted to homeland areas, while COLUMN B is restricted to non-homeland areas.

COLUMN B in Table 53 contrasts mining wards to non-mining wards outside of homeland areas. In non-homeland mining areas, individuals located near mines show statistically significant likelihoods of moving out of poverty (by 4.08 per cent at five per cent significance level) and gaining employment (by 3.88 per cent at 10 per cent significance level) due to mining activity. Poverty reduction's statistical significance is more pronounced than employment increase. Overall, the baseline results indicate that mining benefits are more noticeable for areas with mines located outside former homelands. The comparison of the mean of y supports this, showing higher average poverty and lower employment in homeland areas. The subsequent results in this section delve into the specific opening and closure of mines.

13.6.2. Disentangling mining activity by the opening and closure of mines over time

Table 54 documents $M_{w,t}$ by disentangling the effect of mine opening and the effect of mine closure.

Table 54 – Disentangling Mwt by opening and closure of mines in homeland versus non-homeland areas

	COLUMN A <i>HOMELANDS</i>		COLUMN B <i>NON-HOMELANDS</i>	
	(1) Upper Poverty	(2) Employed	(4) Upper Poverty	(5) Employed
$M_{w,t}open \leq 10km$	-0.00431 (0.0152)	0.00324 (0.0150)	-0.00586 (0.0160)	0.0294 (0.0190)
$M_{w,t}closure \leq 10km$	0.0147* (0.00751)	-0.00119 (0.0204)	-0.0172 (0.0164)	-0.00200 (0.0305)
Constant	1.261*** (0.106)	-0.522*** (0.134)	1.549*** (0.241)	-0.439* (0.239)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	11,234,396	11,234,396	7,874,763	7,874,763
Mean of y	0.708	0.238	0.552	0.425

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The difference in number of observations between COLUMN A and B is because COLUMN A is restricted to homeland areas, while COLUMN B is restricted to non-homeland areas.

Opening mines in areas that lacked mines initially (extensive margin) does not significantly impact poverty. This suggests that the mere introduction of new mines in homeland areas does not appear to have a substantial effect on reducing poverty. On the other hand, the closure of a mine in homeland areas significantly increases poverty by 1.47 percentage points compared to non-mining homeland areas within the 10km vicinity (10 per cent significance level). The closure of mines is associated with adverse effects, including environmental and health concerns when closures are not managed appropriately (Aragón & Rud, 2016).

Disentangling $M_{w,t}$ in non-homeland areas does not yield any statistical significance. This will be re-evaluated shortly using the intensive margin (the impact of changes in $M_{w,t}$ where there exists more than one mine).

13.6.3.Impacts by commodity

This sub-section evaluates the impact of mining activity by commodity, $C_{w,t}$. Beyond the changes in mining activity by opening, closure and expansion/contraction of mines, there are heterogenous impacts caused by the type of commodity mined at the nearest mine at a given year, $C_{w,t}$.

Table 55 – Impact of mining on poverty by type of commodity, homeland versus non-homeland areas

	HOMELANDS N = 11,234,396; Mean of y = 0.708			NON-HOMELANDS N = 7,874,763; Mean of y = 0.552		
	Upper Poverty (A)		Net coefficient (Poverty)	Upper Poverty (B)		Net coefficient (Poverty)
	(1)	(2)	(3)	(4)	(5)	(6)
$M_{w,t} \leq$ 10km	$M_{w,t}$	$C_{w,t} \times M_{w,t}$		$M_{w,t}$	$C_{w,t} \times M_{w,t}$	
(1) Platinum	-0.0138 (0.0132)	-0.00247 (0.0202)	-0.0162 (0.0170)	-0.0417** (0.0202)	0.0144 (0.0285)	-0.0273 (0.0237)
(2) Gold	-0.0159 (0.0112)	0.0254 (0.0542)	0.0095 (0.0533)	-0.0370* (0.0192)	-0.0321* (0.0176)	-0.0691*** (0.0211)
(3) Chrome	-0.00907 (0.0115)	-0.0446** (0.0208)	-0.0537*** (0.0203)	-0.0386* (0.0202)	-0.0227 (0.0281)	-0.0612** (0.0264)
(4) Copper	-0.0145 (0.0111)	-0.0823** (0.0389)	-0.0968** (0.0404)	-0.0413** (0.0204)	0.00639 (0.0426)	-0.0349 (0.0380)
(5) Feldspar	-0.0153 (0.0118)	0.0122 (0.0200)	-0.0031 (0.0172)	-0.0444** (0.0205)	0.0490 (0.0485)	0.0047 (0.0432)
(6) Antimony	-0.0139 (0.0117)	-0.0111 (0.0269)	-0.0250 (0.0238205)	-0.0337* (0.0189)	-0.110 (0.102)	-0.1439 (0.1005)
(7) Diamond	-0.0144 (0.0113)	-0.00405 (0.0585)	-0.0185 (0.0574)	-0.0412** (0.0199)	0.0106 (0.0393)	-0.0306 (0.0341)
(8) Coal	-0.0183 (0.0115)	0.0249 (0.0363)	0.0066 (0.0344)	-0.0499*** (0.0175)	0.0242 (0.0238)	-0.0257 (0.0279)
(9) Phosphorus	-0.0160 (0.0113)	0.0222 (0.0339)	0.0062 (0.0340)	-0.0408** (0.0192)	0.00516 (0.0373)	-0.0356 (0.0420)
(10) Vanadium	-0.0158 (0.0112)	0.0791** (0.0307)	0.0633** (0.0312)	-0.0432** (0.0193)	0.117*** (0.0423)	0.0738* (0.0396)

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Estimation results include ward fixed effects and district x year fixed effects

Table 55 presents the estimation results for assessing the poverty-alleviating effects of various commodities through mining. Among the 10 commodities listed in the table, copper and chrome demonstrate positive impacts on poverty reduction in homeland areas. Conversely, vanadium shows a correlation with increased poverty in these regions. Extending beyond these commodities, non-homeland areas seem to predominantly experience the benefits of mining, though the net coefficients exhibit an overall lack of robustness. Further results for additional commodities can be located in Table 89 of APPENDIX H.

Table 56 – Impact of mining on employment by type of commodity, homeland versus non-homeland areas

	HOMELANDS N = 11,234,396; Mean of y = 0.238			NON-HOMELANDS N = 7,874,763; Mean of y = 0.425		
	Employment (A)		Net coefficient (Employment)	Employment (B)		Net coefficient (Employment)
	(1)	(2)	(3)	(4)	(5)	(6)
$M_{w,t} \leq 10\text{km}$	$M_{w,t}$	$C_{w,t} \times M_{w,t}$		$M_{w,t}$	$C_{w,t} \times M_{w,t}$	
(1) Platinum	0.0123 (0.0122)	0.00574 (0.0189)	0.0181 (0.0156)	0.0374* (0.0215)	0.0220 (0.0989)	0.0595 (0.0953)
(2) Gold	0.0111 (0.0101)	0.0540 (0.0671)	0.0650 (0.0665)	0.0353* (0.0204)	0.0298 (0.0319)	0.0651* (0.0341)
(3) Chrome	0.0130 (0.0108)	0.00810 (0.0164)	0.0211 (0.0156)	0.0464** (0.0194)	-0.0761** (0.0376)	-0.0297 (0.0403)
(4) Copper	0.0140 (0.0101)	-0.0009 (0.0292)	0.0131 (0.0308)	0.0381* (0.0222)	0.00998 (0.0449)	0.0481 (0.0394)
(5) Feldspar	0.0115 (0.0106)	0.0376* (0.0218)	0.0491** (0.0204)	0.0334 (0.0216)	0.0749 (0.0585)	0.1083** (0.0557)
(6) Antimony	0.0107 (0.0103)	0.0680 (0.0533)	0.0787 (0.0521)	0.0413** (0.0196)	-0.0381 (0.149)	0.0032 (0.1475)
(7) Diamond	0.0130 (0.0103)	0.0627 (0.0657)	0.0757 (0.0649)	0.0381* (0.0217)	0.0185 (0.0354)	0.0566** (0.0279)
(8) Coal	0.0172 (0.0110)	-0.0206 (0.0303)	-0.0034 (0.0281)	0.0401 (0.0249)	-0.00338 (0.0221)	0.0367* (0.0206)
(9) Phosphorus	0.0174* (0.00908)	-0.0513 (0.0545)	-0.0339 (0.0560)	0.0389* (0.0208)	0.0691 (0.0684)	0.1080 (0.0720)
(10) Vanadium	0.0147 (0.0102)	-0.0387 (0.0243)	-0.0240 (0.0250)	0.0409* (0.0209)	-0.101** (0.0472)	-0.0603 (0.0445)

Table 56 illustrates the employment impacts categorised by commodity type. In homeland regions, feldspar stands out as the sole contributor with a statistically significant impact on elevating the likelihood of individuals securing employment. Conversely, in non-homeland areas, gold, diamonds, and coal play a substantial role in increasing employment prospects. Notably, the absence of platinum as a significant catalyst for employment growth is remarkable, considering its significance in and around homelands. This observation raises the possibility that platinum mining might not be adequately integrated into local communities. This situation could potentially lend credence to longstanding allegations against the sector, which have found expression through prolonged mining strikes, primarily centred around platinum, spanning the past decade.

SECTION B – The effect of the commodity price boom

This section presents the estimation results of the commodity price boom.

13.6.4. Baseline specification of the effect of the price boom (Pwt)

Table 57 –The impact of the commodity price boom: Homelands vs non-homelands

	COLUMN A HOMELANDS		COLUMN B NON-HOMELANDS	
	(1) Upper Poverty	(2) Employed	(4) Upper Poverty	(5) Employed
$M_{w,t} \leq 10\text{km}$	-0.00186 (0.0238)	0.0196 (0.0204)	-0.0547 (0.0362)	0.0341 (0.0419)
$P_{w,t} \times M_{w,t} \leq 10\text{km}$	-0.00260 (0.00410)	-0.00115 (0.00343)	0.00293 (0.00527)	0.000998 (0.00639)
Constant	1.271*** (0.107)	-0.531*** (0.133)	1.547*** (0.240)	-0.445* (0.238)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	11,234,396	11,234,396	7,874,763	7,874,763
Mean of y	0.708	0.238	0.552	0.425

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 57 displays the fluctuations attributed to the commodity price boom. In contrast to the anticipated significant influence of the mining boom, the estimations do not reveal any statistical significance, whether in homeland or non-homeland regions. It is premature to definitively assert, at this juncture, that the commodity price boom did not hold significance within these areas.

13.6.5. The effect of the price boom (Pwt) disaggregated by opening and closure of mines

This subsection disaggregates the impact of the commodity price boom by mine opening and mine closure.

Table 58 – The effect of the price boom (Pwt) disaggregated by opening and closure of mines

	COLUMN A		COLUMN B	
	HOMELANDS		NON-HOMELANDS	
	(1)	(2)	(3)	(4)
	Upper Poverty	Employed	Upper Poverty	Employed
$M_{w,t}open \leq 10km$	0.0205 (0.0526)	-0.0601 (0.0480)	-0.0276 (0.0236)	-0.00479 (0.0330)
$P_{w,t} \times M_{w,t}open \leq 10km$	-0.00445 (0.00896)	0.0113 (0.00825)	0.00688 (0.00729)	0.0109 (0.00977)
$M_{w,t}closure \leq 10km$	0.00623 (0.0123)	0.0564 (0.0583)	-0.0651 (0.0507)	0.0998 (0.0648)
$P_{w,t} \times M_{w,t}closure \leq 10km$	0.00233 (0.00330)	-0.0158 (0.0113)	0.0102 (0.00859)	-0.0215** (0.0107)
Constant	1.262*** (0.106)	-0.516*** (0.133)	1.550*** (0.240)	-0.443* (0.238)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	11234396	11234396	7874763	7874763
Mean of y	0.708	0.238	0.552	0.425

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 58 documents the results. The overarching observation indicates that the supplementary effect of the commodity price boom lacks notable significance at the extensive margin. Nevertheless, the closure of mines due to shifts in commodity prices does diminish the likelihood of individuals securing employment. This corroborates previous findings that mine closures curtail prospects for local employment.

It is worth noting that the above results provide only a partial view of the commodity price boom's impact. They disregard the intensive margin – the added influence stemming from alterations in mining activity when multiple mines are already in operation. This aspect is detailed in the subsequent section.

SECTION C – The Intensive margin: Impact in established mining zones

13.6.6. Baseline specification of the intensive margin

This subsection investigates the impact of mining activity in areas that have more than one mine. The variable named “count” is used to capture the number of mines within a distance threshold, so that it captures changes in the number of mines rather than the binary (1/0) nature of the $M_{w,t}$ variable.

Table 59 – Baseline specification of the intensive margin – homelands versus non-homelands

	HOMELANDS		NON-HOMELANDS	
	(1) Upper Poverty	(2) Employed	(3) Upper Poverty	(4) Employed
$M_{w,t} \leq 10\text{km}$	-0.0119 (0.0115)	0.0100 (0.0103)	-0.0301 (0.0195)	0.0232 (0.0196)
$M_{w,t} \text{count} \leq 10\text{km}$	-0.00883 (0.00900)	0.0137 (0.00971)	-0.0101* (0.00539)	0.0147*** (0.00445)
Constant	1.270*** (0.106)	-0.525*** (0.133)	1.535*** (0.246)	-0.424* (0.243)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	11234396	11234396	7874763	7874763
Mean of y	0.708	0.238	0.552	0.425

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The intensive margin's significance becomes apparent in non-homeland regions. Interestingly, the count of homeland wards situated within mining zones is nearly equivalent to the count of non-homeland wards within these areas. This outcome implies that even when multiple mines are present in homeland regions, the impact of mining activity on poverty reduction and employment creation remains statistically insignificant when compared to non-homeland regions. This alignment of results is in line with the linkage explanation. It suggests that former homeland areas continue to grapple with underdevelopment, limiting their ability to fully harness local mining prospects. Conversely, it could also point towards the possibility that mining companies are not adequately fostering local connections in former homeland areas.

13.6.7. Intensive margin and the impact of the commodity price boom

	HOMELANDS		NON-HOMELANDS	
	(1) Upper Poverty	(2) Employed	(3) Upper Poverty	(4) Employed
$M_{w,t}count \leq 10\text{km}$	-0.0235 (0.0208)	0.0682** (0.0280)	-0.00824** (0.00364)	0.0135*** (0.00405)
$P_{w,t} \times M_{w,t}count \leq 10\text{km}$	0.00169 (0.00301)	-0.00739* (0.00381)	-0.000992 (0.00147)	0.000706 (0.00140)
Constant	1.266*** (0.105)	-0.532*** (0.128)	1.531*** (0.247)	-0.420* (0.244)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	11234396	11234396	7874763	7874763
Mean of y	0.708	0.238	0.552	0.425

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The intensive margin underscores the significance of the commodity price boom. In homeland areas, the positive impact of the price boom resonates in terms of employment, albeit not with regard to poverty reduction. In harmony with the preceding findings, these results potentially indicate the volatility of employment, tethered to the oscillations in commodity price cycles, particularly within homeland areas.

The outcomes propose that mining-linked employment within non-homeland regions displays greater stability, relying more on the "count" variable than on price fluctuations. Additionally, non-homeland zones reap dual benefits, experiencing both poverty alleviation and employment generation.

Furthermore, the outcomes derived from the comparison between former homeland and non-homeland regions maintain both theoretical and empirical consistency.

13.7. Main Results – Specific Homelands

This section presents results by specific homelands. It focuses mainly on Bophuthatswana in the North West, and Lebowa and Venda in Limpopo, which are the major homeland mining areas (except Venda that has limited mines). Results for the rest of the homelands are presented in APPENDIX I.

Table 60 – Summary statistics by homeland: Bophuthatswana and Lebowa

Variables	Bophuthatswana				Lebowa			
	$M_{w,t} = 1$		$M_{w,t} = 0$		$M_{w,t} = 1$		$M_{w,t} = 0$	
	Mean N =	Standard	Mean N	Standard	Mean N =	Standard	Mean N	Standard
	2,449,953	Error	=	Error	2,944,327	Error	=	Error
			400,576				584,993	
<i>Individual level (working population: 15-65)</i>								
Upper poverty	0.65	0.0003	0.76	0.0007	0.73	0.0003	0.74	0.0006
No income poverty	0.59	0.0003	0.69	0.0007	0.64	0.0003	0.64	0.0006
Employment	0.31	0.0003	0.17	0.0006	0.2	0.0002	0.2	0.0005
Age	34	0.0086	33	0.0227	32	0.0082	32	0.0188
Sex (Male=1)	0.49	0.0003	0.44	0.0007	0.43	0.0003	0.43	0.0006
Education years	8.5	0.0028	7.2	0.0073	7	0.003	6.6	0.0066
Race=Black	0.98	0.0001	0.97	0.0002	0.99	0.0001	0.98	0.0002
Race= Coloured	0.008	0.0001	0.013	0.0001	0.001	0.00002	0.0011	0.00004
Race=Indian/Asian	0.003	0.00004	0.0025	0.00008	0.0008	0.00002	0.0009	0.00004
Race=White	0.014	0.0001	0.0097	0.0002	0.0098	0.0001	0.02	0.0002
<i>Ward level (ratios)</i>								
No piped water	0.21	0.0001	0.15	0.0003	0.28	0.0005	0.2	0.0003
No sewerage system	0.84	0.0002	0.82	0.0005	0.86	0.0002	0.92	0.0002
No refuse removal	0.78	0.0002	0.83	0.0005	0.87	0.0002	0.9	0.0002
No electricity lights	0.36	0.0002	0.49	0.0006	0.34	0.0002	0.34	0.0004
Traditional informal dwelling	0.25	0.0001	0.16	0.0002	0.18	0.0001	0.17	0.0002
Total Population	9,200	2.510	7,100	2.17358	10,000	02.226	9,300	4.058
<i>Distance</i>	21	0.0102	62	0.0166	25	0.0085	65	0.0149

Table 60 presents summary statistics of the Bophuthatswana and the Lebowa homelands. This section essentially lays the foundational work to specific case exploration of these mining areas in a post-doctoral project.

13.7.1 Bophuthatswana homeland

Situated in the North West Province, the Bophuthatswana homeland takes centre stage as a primary case study, significantly informing the research conducted by Butler, Rotberg, and Adams (Butler, Rotberg, & Adams, 1978), as extensively discussed in Section 13.2. This subsection offers a concise profile of the mining activity within this particular homeland. Additionally, it presents empirical findings related to the mines operating in this homeland, with a specific focus on the commodities boom during the 2000s.

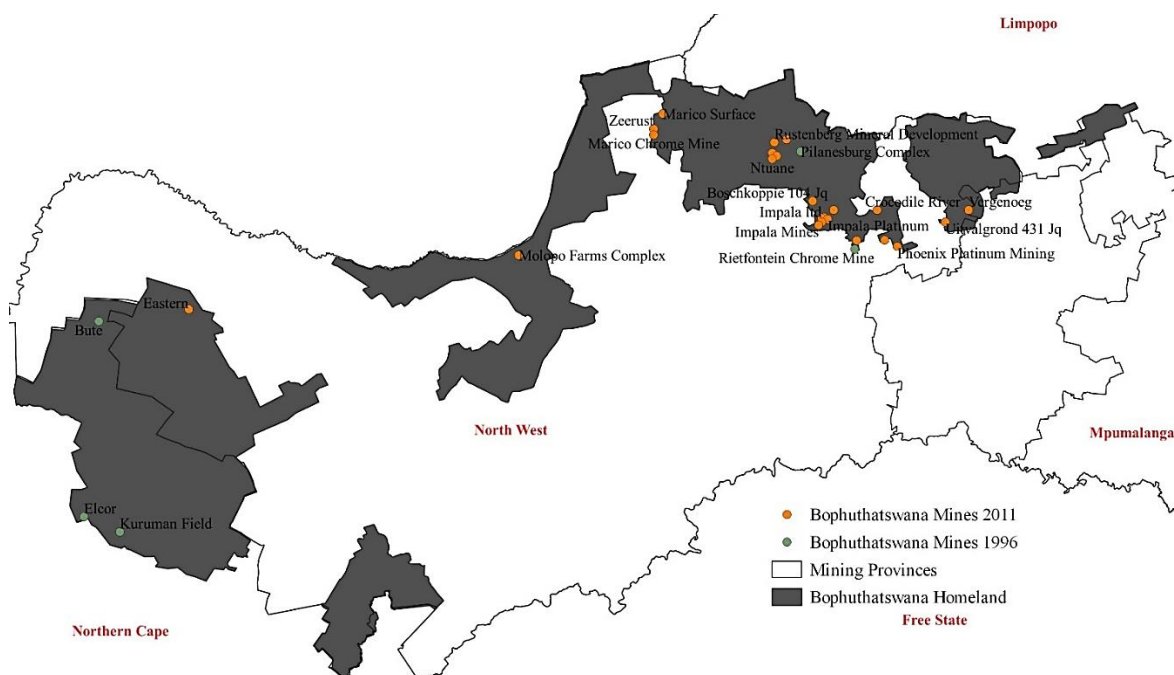


Figure 56 – Map of the Bophuthatswana homeland 1996 and 2011

Source: Author. Mapped using QGIS using mining data from USGS and shapefile from ArcGIS

Overview of the development of new mines in the Bophuthatswana area

Table 61 – Mines located in the Bophuthatswana former homeland, 1996-2011

Ward Code	Province	Year	No. of mines	Mine/project name	Major Commodity
63702018	North West	1996 & 2011	1	Uitvalgrond 431 Jq	Vanadium
63703026	North West	1996 & 2011	2	Bafokeng South Mine	Platinum
63703028	North West	1996 & 2011	1	Crocodile River	Platinum
63703024	North West	1996 & 2011	3	Rustenburg-Impala Sector: Merensky	Platinum
63703004	North West	1996 & 2011	1	Impala Platinum	Platinum
63703024	North West	1996 & 2011	3	Impala Platinum	Platinum
63703024	North West	1996 & 2011	3	Impala Platinum	Platinum
63703005	North West	1996 & 2011	1	Impala Platinum	Platinum
63702026	North West	1996 & 2011	3	Matthey Rustenburg Ref-Wadeville	Platinum
63907011	North West	1996 & 2011	1	Eastern Platinum	Platinum
63705008	North West	2011	1	Pilansberg platinum Mines	Platinum
63703002	North West	2011	1	Boschkoppie 104 Jq	Platinum
63702026	North West	2011	1	Siphumelele Mine	Platinum
63702032	North West	2011	1	Phoenix Platinum Mining	Platinum
63803006	North West	2011	1	Molopo Farms Complex	Platinum
63702036	North West	1996 & 2011	1	Vergenoeg	Fluorine
63805019	North West	1996	6	Marico Surface	Chrome
63805019	North West	1996 & 2011	6	Zeerust Chrome Mine	Chrome
63805019	North West	1996 & 2011	6	Marico Underground	Chrome
63705006	North West	1996 & 2011	1	Rustenberg Mineral Development	Chrome
63705027	North West	1996 & 2011	4	Bathlako Chrome Corp. Smelter	Chrome
63705027	North West	1996 & 2011	4	Bathlako Chrome Mine	Chrome
63705027	North West	1996 & 2011	4	Ruighoek Chrome Mine	Chrome
63705027	North West	1996 & 2011	4	Ntuane	Chrome
63703033	North West	1996	1	Rietfontein Chrome Mine	Chrome
63705014	North West	1996	1	Pilanesburg Complex	Britholite
34501001	N Cape	1996	1	Bute	Asbestos
34501005	N Cape	1996	1	Elcor	Asbestos
34502008	N Cape	1996	1	Kuruman Field	Asbestos

Table 61 presents the catalogue of industrial mines within the Bophuthatswana region. Aside from asbestos mines, which ceased operations in the 1990s, the predominant mining endeavours in this area revolve around platinum and chrome. During the studied period, noteworthy platinum mining expansion took place within this former homeland, particularly after 1996, led by prominent entities like Anglo Platinum, Impala Platinum, and Lonmin Platinum. A considerable portion of these operations is situated on land collectively owned by communities, most notably the Bafokeng community. Consequently, these regions exhibit distinct dynamics due to the communities' heightened involvement in operational management and the consequent benefits they reap, as elaborated in Part I, Chapter 10.

Comparatively, descriptive findings reveal notably reduced poverty levels within the Bophuthatswana homeland when contrasted with other mining-centric homelands such as the

Lebowa homeland. This distinction is supported by empirical evidence illustrated in Figure 53 and Figure 54. The inquiry naturally arises: what is the actual empirical impact of industrial mining on this specific homeland?

Table 62 – Mining activity and the commodity price boom: Former Bophuthatswana homeland

	(1) Upper Poverty	(2) Upper Poverty	(3) Employed	(4) Employed
$M_{w,t} \leq 10\text{km}$	-0.00730 (0.0145)	0.0169 (0.0299)	0.0264* (0.0151)	0.0393 (0.0287)
$P_{w,t} \times M_{w,t} \leq 10\text{km}$		-0.00473 (0.00534)		-0.00252 (0.00489)
Constant	1.267*** (0.157)	1.257*** (0.160)	-0.442* (0.242)	-0.447* (0.244)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	2,830,173	2,830,173	2,830,173	2,830,173
Mean of y	0.668	0.668	0.286	0.286

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 62 documents the impact of industrial mining in the Bophuthatswana homeland. The baseline spatial specification results, captured in columns 1 and 3, reveal that the opening of a mine within a 10km radius corresponds to a 2.64 per cent increase in employment probability for nearby individuals (at 10 per cent significance). However, this upsurge lacks statistically significant correlation with poverty alleviation. Incorporating the commodity price boom into the analysis yields non-significant outcomes. On the whole, the mining impact in the Bophuthatswana area, based on prevailing socio-economic indicators, exhibits a slightly positive inclination concerning employment but falls short in terms of poverty alleviation. Importantly, this is also the site of the Marikana massacre, underscoring the ongoing debate about the qualitative repercussions of mining, particularly concerning poverty reduction.

13.7.2. Lebowa homeland

The Lebowa homeland, situated in the Limpopo province, stands as the largest homeland and encompasses the eastern limb of the platinum belt. Notably, the province's economy burgeoned from a modest R31 billion per annum in 1995 to R231 billion in 2014, a transformation primarily attributed to the development of the platinum belt within the Lebowa area, as highlighted by Lucas Ledwaba (2016). This region holds 41 per cent of South Africa's platinum group metals and, by 2014, mining accounted for 27 per cent of the provincial GDP. Ledwaba's account (2016) recollects the transition of Tubatse town in Lebowa from a state of "grinding poverty," born out of a stagnant economy and years of apartheid-era neglect, into a bustling centre of economic activity, fuelled by the establishment of 17 new mining operations between 2001 and 2014.

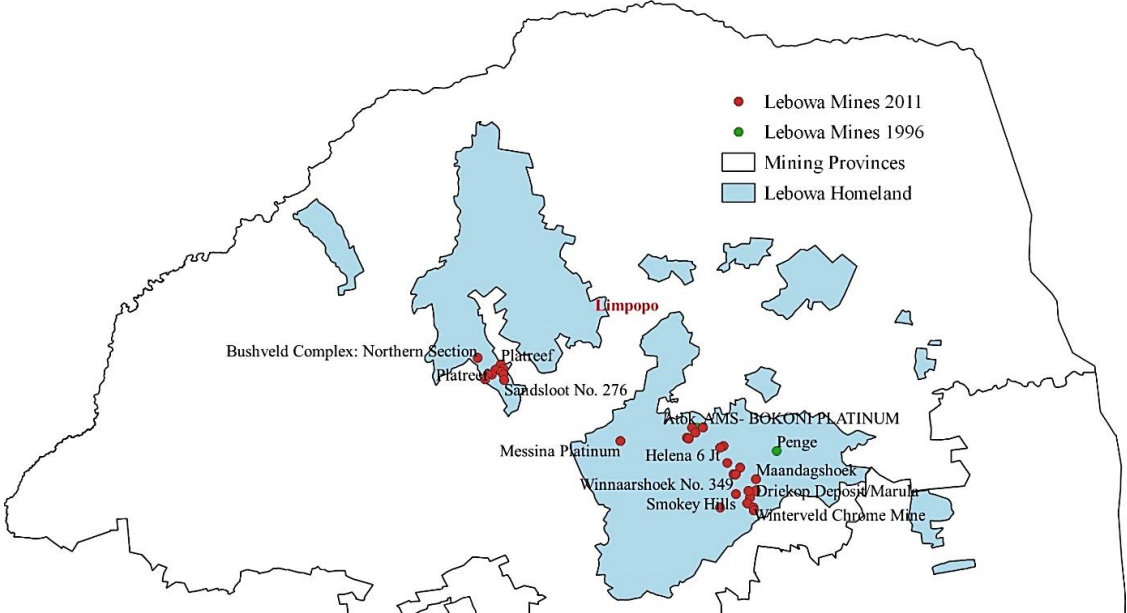


Figure 57 – Map of the Lebowa homeland 1996 and 2011

Source: Author. Mapped using QGIS using mining data from USGS and shapefile from ArcGIS

These mining developments are primarily driven by two factors. First, the BEE mining policy, aimed at integrating emerging black capitalists, stimulated investment deals propelling the development of the eastern platinum belt (Nxele, 2022). The second factor is the commodity price boom (see Figure 52), which, when combined, led to the inception of new mines and the expansion of existing ones. The Lebowa case study uniquely probes the intersection of historical homeland deprivation and the expansion of new mining endeavours. Not only does it address the impact of

mining on former homelands, given that the mines were facilitated by BEE-oriented investments, but it also sheds light on how such investments influence community-level poverty.

Historically, mining activities around the Tubatse municipality were centred on chrome and vanadium. However, several mines closed during the past decade (see Table 63). During the price boom, the area transitioned predominantly to platinum. Platinum mines contributed over 50 per cent to employment and more than 60 per cent to turnover figures in the province by 2005, as noted by Venter (2007). Venter's analysis indicates that employment within the Tubatse mining sector in Lebowa tripled since 2001. The forthcoming empirical investigation will assess the extent to which this transformation into a platinum hub has mitigated the perils of poverty and unemployment.

Overview of the development of new mines in the Lebowa area

Table 63 – Mines or projects located in the Lebowa former homeland, 1996-2011

Ward Code	Province	Year	Mine name	Major Commodity
94704009/12	Limpopo	1996 - 2011	Atok/Bokoni Platinum	Platinum
93505017	Limpopo	1996 - 2011	Messina Platinum	Platinum
94705010	Limpopo	1996 - 2011	Forest Hill 117 Kt/Implats	Platinum
94705008	Limpopo	1996 - 2011	Winnaarshoek No. 349	Platinum
94705002/11/19	Limpopo	2011	Maandagshoek/Modikwa	Platinum
93607013/14/17/18	Limpopo	1996 - 2011	Potgietersrus/Mogalakwena	Platinum
94705003	Limpopo	2011	Twickenham Platinum	Platinum
94705008/10/19	Limpopo	2011	Marula Platinum Mine	Platinum
94705012	Limpopo	2011	Smokey Hills	Platinum
93607011	Limpopo	1996 & 2011	Bushveld Complex: Northern Section	Iron
94705007	Limpopo	1996 & 2011	Montrose Hendriksplaats Chrome	Chrome
94704011	Limpopo	1996 & 2011	Waterkop	Chrome
94704012	Limpopo	1996	Jagdlust Chrome Mine	Chrome
94705007	Limpopo	1996 & 2011	Dilokong	Chrome
94705002	Limpopo	1996 & 2011	Winterveld Chrome Mine	Chrome
94705016	Limpopo	1996	Penge	Asbestos

Table 64 – Temporal variation created by the commodity price boom: Former Lebowa homeland

	(1) Upper Poverty	(2) Upper Poverty	(3) Employed	(4) Employed
$M_{w,t} \leq 10\text{km}$	-0.0358* (0.0192)	-0.0206 (0.0479)	0.00955 (0.0115)	0.0456 (0.0460)
$P_{wt} \times M_{w,t} \leq 10\text{k}$		-0.00244 (0.00714)		-0.00581 (0.00749)
Constant	1.308*** (0.189)	1.308*** (0.190)	-0.640*** (0.170)	-0.641*** (0.169)
Ward fixed effects	Yes	Yes	Yes	Yes
District x Year fixed effects	Yes	Yes	Yes	Yes
Observations	3,525,009	3,525,009	3,525,009	3,525,009
Mean of y	0.731	0.731	0.202	0.202

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 64 presents the empirical results of the impact of mine expansion on the Lebowa area. The outcomes reveal that the baseline effect of mine activity (column 1) substantially diminishes the poverty incidence among individuals residing in surrounding areas, relative to those situated farther away. However, the additional effect of the commodity price boom does not yield statistically significant results. The net influence on employment is also not statistically significant (columns 3 and 4). The Lebowa area is still in the process of fully harnessing the potential of future commodity price booms.

13.7.3. Venda homeland

The Venda homeland is positioned in the northeastern corner of the Limpopo province. Bordering the Kruger National Park and in proximity to the Zimbabwean border, the region boasts agricultural richness intertwined with mining activity centred around coal, copper, and industrial minerals.

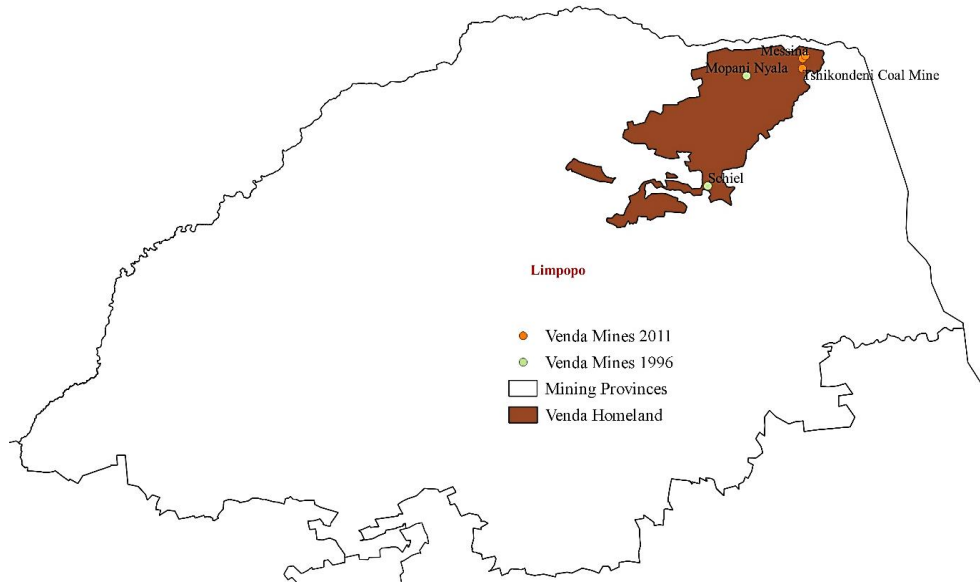


Figure 58 – Map of the Venda homeland 1996 and 2011

Source: Author. Mapped using QGIS using mining data from USGS and shapefile from ArcGIS

Table 65 – Mines located in the Venda former homeland, 1996-2011

Ward Code	Province	Year	No. of mines	Mine name	Commodity
93401002	Limpopo	1996 & 2011	5	Messina	Copper
93405033	Limpopo	1996 & 2011	2	Tshikondeni Coal Mine	Coal
93402010	Limpopo	1996	1	Mopani Nyala	Magnesium
93404003	Limpopo	1996	1	Schiel	Phosphorus

Table 65 compiles the mines present in Venda during the study period. The Messina copper mine and the Tshikondeni coal mine remained operational throughout the study timeframe.

Table 66 –The impact of the commodity price boom: Former Venda homeland

	(1) Poverty	(2) Poverty	(3) Employed	(4) Employed
$M_{w,t} \leq 10\text{km}$	-0.0725*** (0.0183)	-0.0525** (0.0255)	0.00767 (0.0403)	-0.185*** (0.0232)
$P_t \times M_{w,t} \leq 10\text{km}$		-0.00660 (0.00849)		0.0632** (0.0121)
Constant	1.732*** (0.507)	1.739*** (0.511)	-0.695 (0.424)	-0.763* (0.422)
Ward FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	1,205,946	1,205,946	1,205,946	1,205,946
Mean of y	0.731	0.731	0.216	0.216

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 66 documents the impacts of industrial mining in the Venda area. The results underscore the overall positive impact of mining on poverty reduction and employment enhancement. Amid the commodity boom, individuals residing in mining wards exhibited a statistically significant probability of escaping poverty, in comparison to individuals located farther away within the homeland (columns 1 and 2). The results parallel this positive trend in terms of employment.

13.8. Discussion and Conclusion

The mining industry, government, and communities confront a challenge rooted in the enduring and consequential impacts of mining. This influence, as expounded in this study, encompasses positive economic benefits as well as negative environmental and health ramifications that ultimately have economic reverberations. The core issue addressed herein pertains to structural poverty within homeland areas, and the role mining plays in socio-economic measures encompassing income poverty and employment.

Sections 13.1 to 13.4 delved into historical poverty within former homeland areas, isolating the creation of homelands via Separate Development as a primary factor driving systemic poverty and elevated unemployment. Despite political reintegration upon the advent of democracy in 1994, economic underdevelopment persisted within these enclaves. The chapter focused on addressing the prospects for industrial mining development to invigorate local economic opportunities.

Section 13.6 pursued empirical investigation, leveraging individual-level census data from 1996, 2001, and 2011, alongside geocoded mining data. The study compared mining wards within homelands and those outside, unveiling persistent disparities for individuals located in former homeland areas. While industrial mining activity notably alleviates local income poverty and augments employment opportunities, this effect attenuates within homeland areas. Further examination of intra-homeland variation demonstrates pockets of substantial mining progress, such as the Venda homeland, where individuals residing in mining wards witnessed upliftment linked to mining, fostering poverty reduction and employment. However, the volatility of employment levels during commodity price booms remains a concern. Most commodities present in homeland areas disproportionately benefit non-homeland regions.

Beyond simplified initiatives like localised labour procurement and select corporate social responsibility (CSR) endeavours, the evidence that industrial mining still predominantly favours non-homeland regions underscores the necessity for more intricate and extensive local supply chain linkages. These more intricate expansion-linked linkages encompass specialised mineworker gear procurement, essential tool provisioning, and local maintenance services. These areas necessitate skill development and local business growth, factors that are underdeveloped nationwide and notably within homeland areas.

The prevalence of BEE deals driving mining booms in most homeland areas presents an opportunity to re-envision black economic empowerment beyond elitist arrangements. Extended labour and community strikes in mining areas have proven costly for mine operations and, by extension, investment success. Enhanced policy effectiveness can be achieved by emphasising technical skills development within local communities, bolstering local technical colleges (TVETs), and transforming these institutions into technology-based business incubators. Nevertheless, mining expansion intensifies local pollution, undermining subsistence farming, a vital livelihood source. Addressing this adverse impact necessitates fostering and safeguarding pockets of communal agricultural activity, alongside exploiting environmental management as a local business prospect. In the absence of these interventions, BEE policy risks eroding local legitimacy. Revitalising this legitimacy can involve prioritising sustainable social investment in skills, production, and localised supply chain integration. Failure to address these concerns will perpetuate the enclave effect in homelands and exacerbate the dissipation of industrial mining benefits, especially upon mine closure.

CHAPTER 14: Conclusion to the PhD. Reconciling racial class transformation with inclusive investment growth

14.1. Introduction

As articulated in Chapter 1, South Africa cannot abandon the imperative of transformation, nor can it forsake capital investment growth. Transformation is crucial for political stability, while investment is essential for economic growth and the viability of the transformation endeavour. When these imperatives synergise, transformation occurs in a way that stimulates investment, and a transformed economy creates a larger, more stable market. To address the intricate challenge of rectifying South Africa's complex political and economic legacy, a productive economy generating productive rents through entrepreneurship, enterprise, and skills development is indispensable.

This concluding argument is structured as follows: firstly, it delves into the "what" by reflecting on South Africa's 1994 political settlement and the sub-bargains that constitute(d) it, particularly the inclusion of new elites and the incorporation of non-elites predicated on anticipated socially inclusive economic growth. Secondly, it explores the "why" by highlighting the significance of capital and social investment in realising and upholding the political settlement and the social contract. Thirdly, it examines the "how" of cultivating investment. These three dimensions encapsulate some of the PhD's key contributions. A subsequent section outlines the limitations of the project and future research directions emerging from it. Finally, the author concludes by expressing unwavering hope and a "passion for the possible," serving as a foundation for ongoing efforts to ameliorate South Africa's unequal and developing society.

14.2. The political settlements and its sub-bargains

The cornerstone of South Africa's political settlement rests upon a set of sub-bargains, encompassing the gradual ascent of new elite entrants to economic prominence and the economic integration of non-elites. These sub-bargains operate under the broad framework of racial redistribution to facilitate racial class transformation. This goes beyond simple wealth redistribution; it aspires to build an inclusive, racially and socially harmonious nation through

economic growth. Enabling and maintaining the ever-growing socio-economic demands of the political settlement necessitates capital investment and productivity, leading to a fundamental challenge shared by many middle-income nations: the pursuit of sustainable, inclusive investment-driven growth. However, the interplay between transformation and investment increasingly tilts out of balance due to strained state-business relationships, fractures in ruling party governance, and mounting socio-economic pressures. Rather than being a platform for productive engagement, transformation becomes an arena of unproductive contestation for rent-seeking, creating a disconnect between transformation and investment. This mutual exclusivity yields suboptimal growth, enduring inequality, and elevated unemployment.

14.3. Capital investment funds the political settlement

Each sub-bargain within the political settlement hinges on a growing economy; without this growth, the consequences range from deteriorating living standards to governance decline. Capital investment channelled into job-creating productive activities provides a vital funding stream for these sub-bargains. In South Africa's mining sector, a substantial employer of unskilled workers relative to tertiary sectors, investment failures stemming from predatory elite deals directly affect impoverished families. The study unveils how failures in investments accumulate at the deal level, impairing credible commitment and causing an aggregate decline in investment. This downward spiral underscores the interconnectedness of investment and transformation. The broader state-business agreement has eroded, hampering investment. This challenge permeates beyond mining to the broader economy.

14.4. Sustaining ongoing investment

14.4.1. The primacy of credible commitment

Credible commitment becomes a pivotal factor in investment decisions. Although court rulings have upheld the "once empowered, always empowered" principle in mining, safeguarding incumbent firms from higher BEE ownership mandates, this does not fully address transformation imperatives, leaving residual uncertainty. Formal empowerment rules alone cannot ensure transformation; lasting transformation requires continuous, systematic cooperation between businesses and the government, built upon growth and mutual cooperation. This sustained partnership is the foundation for reconciling transformation, investment, and growth.

14.4.2. Building good partnerships as a way forward

The credibility of growth-oriented, transformative development hinges on reliable partners and leaders. While opportunistic players might dominate, the existence of patient, productive partners is underestimated. The study reveals that certain BEE policies inadvertently facilitated predatory practices, crowding out patient partners. Yet, shifts are occurring as political connections weaken in influence, providing room for good partnerships. Patient institutional investors, driven by social values and long-term investments, could drive virtuous circles of capability-building, productivity, and job creation. As BEE deals wane, space emerges for productive, socially and market-responsive entrepreneurship.

14.4.3. Socially responsible investing is important and strategic

Chapters 9 to 13 emphasise the dual role of communities as both actors and victims in investments. The inclusion of non-elites in the political settlement, particularly communities and labour, underscores the importance of a "social license" to operate, vital for sustaining mining operations. Prioritising localisation, job creation, and environmental sensitivity enhances the legitimacy of the political settlement and promotes sustainable mining. A balance between positive multipliers and harmful spillovers is essential to maximise the benefits of mining. Empirical evidence underscores mining's nuanced impact on local communities, necessitating forward-thinking, inclusive partnerships for equitable economic opportunities.

14.4.4. Politics matters, the state matters, in workable ways

The study positions politics as a strategic driver of investment, emphasising alignment of incentives with context and relationships for long-term engagement. The conceptual framework links the macro political settlement with micro-level deals and partnerships, illustrating how politics unfolds at the deal level. The dynamic interaction of political factions within the ruling party influences deal quality. While strong states and long-term leadership are vital, cooperative efforts do not necessarily entail "state capture." Positive gains result from cooperation rather than collusion, offering overlapping interests conducive to win-win cooperation at various levels.

14.5. Limitations and future research

There are limits to how far one may generalise the study's hypotheses and findings. First, the work suffers from data limitations. Part I, the is constrained by the number of case studies at incumbent level, and the absence of interviews (in large part because of the constraints that resulted from the COVID pandemic) to complement the research and analysis. Moreover, as it focused only on the mining sector, the study's findings may not be applicable to other sectors. Similarly, Part II of the PhD is limited by having only three waves in the panel (1996, 2001, and 2011), as well as the absence of fieldwork in mining communities that could not only enrich the findings but update the findings beyond the 2011 census. Also noted, the study would improve by applying recent estimation techniques that address problems related to staggered treatments.

These limitations also make the study extendable at the post-doctoral phase.

14.6. Lifelong conviction of hope and “the passion for the possible”

As a multi-disciplinary project, this PhD uniquely contributes by exploring the role of deals in enabling credible investment commitment and investigating mining's impact on local communities. The research uncovers different elite transformation trajectories linked to corporate strategies and deal types. The study underscores that productive state-business collaboration is instrumental for reforming economies, advocating cooperation over collusion.

In closing, the PhD author remains steadfast in his conviction of the "passion for the possible," driven by the pursuit of productive collaboration between stakeholders, offering a beacon of optimism for advancing South Africa's transformative and developmental journey. Now to begin.

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