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Burger, Floris J.; Pelser, Theuns G.; Ellis, Suria

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Organisational alignment of South African mining organisations

Authors:
Floris J. Burger[1]
Theuns G. Pelser[2]
Suria Ellis[3]

Affiliations:
[1]Competitive Dynamics International Holdings (Pty) Ltd, Newlands, South Africa

[2]Graduate School of Business and Leadership, University of KwaZulu-Natal, Durban, South Africa

[3]Department of Statistical Consultation Service, Faculty of Natural Sciences, North-West University, Potchefstroom, South Africa

Corresponding author:
Theuns Pelser,
pelser@ukzn.ac.za

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Background: South African mining organisations are facing numerous challenges: decreasing commodity prices, policy uncertainty, rising input costs and increasing stakeholder expectations. To successfully address these challenges, each mining organisation needs to respond in a unified, aligned way.

Objectives: This study determined the degree of perceived organisational alignment among managers within South-African-based mining organisations and uncovered the key enablers of organisational alignment.

Method: Data were collected from 286 managers from a selection of all the major South African mining commodity sectors on their perceptions of the degree of organisational alignment, as well as on the enablers of organisational alignment. Applying structural equation modelling, 5 of the 11 organisational alignment enabling factors indicated a unique influence of practical importance on perceived organisational alignment. Three data-model fit tests confirmed the pattern of variances and covariance in the data.

Results: This study not only presented a concept of perceived organisational alignment and associated enabling factors but also provided a wide range of recommendations on how each of the enabling factors can be leveraged in order to improve perceived organisational alignment.

Conclusion: Taking a largely sociological perspective of organisational functioning within the South African mining industry's fast-changing internal and external stakeholder environment, this study contributed to the discipline of strategy planning and execution in general and in particular to the subject area of organisational alignment.

Keywords: Organisational purpose; stakeholders; strategy planning; strategy execution; organisational alignment.

Introduction

South Africa is one of the the world's richest country in terms of mineral resources and has the potential to be the world's most important and competitive mining industry. However, the mining industry is constantly experiencing negative sentiments from investors and also government, the latter manifesting as resource nationalism. Compounding the aforementioned are pressures from communities for increased corporate social responsibility, cost pressures, commodity price uncertainty and demands from organised labour and environmental bodies (Deloitte, 2014, p. 27). While mining organisations commit considerable resources to understand key risks, social pressures and opportunities, their ability to respond systematically to obtain the industry return on investment sustainably and responsibly in the medium- and long-term interest of all stakeholders is not clear.

With more than 52 commodities under its surface, South Africa has the world's largest reserves of platinum, manganese, chrome, vanadium and gold, as well as major reserves of coal, iron ore, zirconium and titanium minerals. The combined value of these resources is estimated at US$ 2.5 trillion (Deloitte, 2013, p. 5). In 2015, the South African mining sector sold commodities worth R391.4 billion of which 69% came from exports. Mining accounted for 7.7% of gross domestic product (GDP) directly, and approximately 17% if direct, indirect and induced effects are included. The 7.7% contribution to GDP compares to a 14.7% direct share in 1994. In 2015, investment in mining shrank by 0.6% as organisations scaled back. Despite this, mining accounted for 10.8% of total fixed investment (gross fixed capital formation) and for 17% of private sector investment in 2015 (CM, 2016, p. 23).

Although not unique in this regard, mining organisations have the unenviable task of balancing the needs of multiple stakeholders. Each stakeholder group has its own unique objectives, often conflicting with those of other stakeholders (Deloitte, 2013, p. 6). Mining is often perceived as an environmental and socially disruptive activity and growing evidence illustrates that sustainability is now a core non-technical function of mining organisations itself – in parallel with innovation, market fluctuations and declining ore grades, according to Ololade and Annegarn (2013, p. 568). Many mining operations, as a result, have become perfect storms: epicentres amid swirling reputational threats, land-use conflicts, political interference, regulatory uncertainty, infrastructure shortcomings, corruption and often hostile community relations (Kirschke, 2014, p. 44). Furthermore, mining organisations' pursuit of profit needs to be increasingly balanced with the needs of society and of the environment (Deloitte, 2016, p. 27; Sorensen, 2012, p. 21). For organisations in the mining industry, the emphasis on localisation may present fundamental shifts in business strategy (Hermanus, 2017, p. 817). Owen and Kemp (2013, p. 29) argued that a necessary first step for mining organisations is to reconcile its internal risk orientation with external expectations which requires a less defensive and more constructive approach to stakeholder engagement and collaboration.

Research problem and research objectives

Antin (2013, p. 1) commented that while the South African mining industry has played a key role in attracting foreign investment and creating leading global organisations, it remains South Africa's most critically observed economic sector. The overarching challenge South African mining organisations have to face, is to find an equitable balance of interests, ensuring that mining is productive and profitable, as well as being fair to all stakeholder groups (Deloitte, 2013, p. 5). Also, South African mining organisations need to be more innovative in the way they interact with local communities, government agencies, their employees and shareholders (Deloitte, 2014, p. 38). For mining organisations to successfully compete in an uncertain environment, it is crucial to respond and adapt in unison and still be efficient. Yet, while the majority of organisations consider alignment to be important, almost 60% believe that their alignment is ineffective (Burger, 2017, p. 5). Kaplan and Norton (2005) said that, on average, 95% of an organisation's employees are unaware of, or do not understand, its strategy. Ryu (2015, p. 473) commented that leaders often find that their subordinates do not know the organisation's vision and goals, despite consistent efforts to make them understand and accept the organisation's vision and goals. Sull, Homkes and Sull (2015, p. 63) found that less than 33% of senior executives' direct reports clearly understand the connections between organisational priorities, and the share falls to 16% for frontline supervisors and team leaders and that only 55% of middle managers can name one of their organisation's top five priorities.

In order to be able to meet the challenges referred to above, mining organisations need to improve their capability to align their value creation process with the expectations of all its stakeholders. To be responsive, organisations require integrated and dynamic processes to align organisational resources, both internally in a coordinated way, as well as a unit in response to the external environment. This study focused on the South African mining industry where the problem of organisational misalignment and the factors affecting alignment need to be researched. The main research question to address the research problem is: *What are the antecedents and enabling factors influencing perceived organisational alignment within South African mining organisations?* To address the stated research problem, the following research objectives were formulated: firstly, to determine the degree of perceived organisational alignment and secondly, to determine the enablers and antecedents of organisational alignment.

Literature review

Organisations may best be regarded as systems which exist within an ever-changing and turbulent environment to transform inputs into outputs (Schneider & Somers, 2006, p. 353; Yukl, 2013, p. 93). Senge (1990, p. 23) commented that system thinking should be viewed as a framework for seeing interrelationships rather than objects or subjects, for seeing patterns of change rather than static snapshots, whereas Burnes (2009, p. 253) concluded that an organisation's external and internal environments cannot be separated. Organisations that have a narrow view on external, as well as internal interdependencies will eventually experience a decline in performance as relationships extinguish or become destructive because of the inadequacy of interaction (Schneider & Somers 2006, p. 352). Although organisations are cognitively open and therefore interact with its environment – albeit not necessarily in a structured way – it needs to be operationally closed in order to allow constant alignment of purpose (Gunaratne, 2008, p. 176). This alignment is required as a counter to entropy. Organisations are complex social systems that require on-going adaptation (alignment and re-alignment) to an ever-changing environment. According to Burger (2017, p. 106), the three main perspectives on alignment in literature – process, relational and strategic, each identify distinctive arrangements for translating organisational priorities into goals, objectives and activities. Adaptation will only take place if interdependence is perceived. Adaptation will also only be efficient if sufficient common cause and process and task interdependence is present (Burger & Pelser, 2018, p. 143).

Burnes (2009, p. 57) viewed an organisation as a system of cooperating human activities with the objective to create and exchange utilities. Freeman, Martin and Parmar (2007, p. 312) described an organisation as a complex open system that exists to create and trade value to the benefit of a variety of constituencies or stakeholders, whereas Grant (2011, p. 35) argued that an organisation could be considered to be a coalition of interest groups operating for the benefit of

multiple constituencies. Value, however, has different and often conflicting meanings, not only in between all of the organisation's external constituencies, but also internally between role-players (Burnes, 2009, p. 172; Grant, 2011, p. 36;). At the heart of a discussion on value creation is self-interest, and whose needs are to be addressed. Hughes (2010, p. 49) reasoned that creating and trading value in an efficient and effective manner has to be the goals of organisations in order to be successful within a complex economy.

The managers of the organisation (agents), however, are autonomous individuals, each with their own interpretation of *value,* as well as their own sense of *purpose*, and as a result, the interests of the principles and the agents are not necessarily aligned. Such divergence of interests and subsequent organisational goals result in loss of efficiency and associated residual loss (Acharya, Myers, & Rajan, 2011, p. 689). The identification of stakeholders an organisation needs to align with, is convoluted if one considers the tension between stakeholder theory and shareholder theory (Friedman cited by Harrison & Wicks, 2013, p. 97).

Mitchell, Weaver, Bradley, Bailey and Carlson (2016) and Carroll and Buchholtz (2012, p. 67) suggested that stakeholders can be identified by their possession or attributed possession of one, two or all three of the following attributes: the stakeholder's *power* to influence the organisation, the *legitimacy* of the stakeholder's relationship with the organisation, and the *urgency* of the stakeholder's claim on the organisation. Alignment between the organisation and its environment is also a key premise of strategic management if it is to maintain competitiveness, as well as the survival of the organisation over the long run. Organisations are typically reluctant to embrace change because of inertia and 'being comfortable' despite the current situation and have proven to be good buffers for individuals against the constant change drivers from the external environment (Yukl, 2013, p. 91).

Constant change for the sake of change, however, can be disruptive to an organisation. Gell-Mann (cited by Esade & McKelvey, 2010, p. 421; Schneider & Somers, 2006, p. 357) argued that emergent complexity within an organisation is a function of the variety present in its environment. Referring to Ashby's law of requisite variety, Esade and McKelvey (2010, p. 421) reasoned that 'only variety can destroy variety'. Structures have functionality only in the context of the use of the structure to contribute to a systemic need. In and of themselves, structures are only physical, or in the case of organisations, social arrangements or patterns (Burger & Pelser, 2018, p. 156; Thompson, Peteraf, Gamble, & Strickland 2012, p. 393).

Organisations are social systems held together with the glue of shared commitment to common ends. People are goal-oriented and are 'pulled' along by a sense of purpose, desire and value expectations (Brightman & Moran, 2001, p. 254, 259). To be effective, organisational and subsequent individual goals need to be consistent with long-term goals and linked to strategy (Grant, 2011, p. 50), while Thompson et al. (2012, p. 68) commented that goal-setting is a top-down process that should extend to the lowest organisational level. Foss and Lindenberg (2013, p. 85), however, argued that many of the causal linkages between strategic management processes and value creation are unclear – in particular, how strategic goals affect value creation.

According to Burger (2017, p. 292), the debate regarding what organisational alignment is, why it is required, how organisations can improve alignment and how it should be researched, is on-going. The authors added that although alignment is a top-management concern, no comprehensive model of the construct is commonly used. Corsaro and Snehota (2011, pp. 1042–1043) commented that the concepts of alignment and misalignment remain vague, that gaps exist in the literature and that scholars hold different opinions about the meaning and the consequences of alignment. Baker, Jones, Cao and Song (2011, p. 300) suggested that theoretical refinement is needed to describe the concept of alignment and the measurement thereof, in order to make clear its role in providing value to the organisation. However, alignment is a broad topic and the concept originally developed from the idea that organisations should match their resource allocation with the competitive environment (Cao, Baker, & Hoffman, 2012, p. 568).

The relationship between organisational alignment and organisational performance is intuitive and various authors have argued the importance thereof (Baker et al., 2011, p. 300; Burger & Pelser, 2018, p. 145; Roca-Puig & Bou-Llusar, 2006, p. 24). Kaplan and Norton (2005, p. 1) argued that alignment creates focus and coordination across even the most complex organisations, making it easier to identify and realise synergies. Kaplan and Norton (2005, p. 2) referred to organisational alignment as one of the five key strategy implementation management processes. Discussing organisational strategy, Peters (2014) referred to alignment as fit, and proposed that when organisations achieve harmony among the three 'hard Ss' of strategy, structure and systems, and four 'soft Ss' of skills, staff, style and shared values, they tend to become higher performing or excellent organisations.

Fry and Smith's (1987) seminal work on organisational strategy suggested that an organisation's ability to achieve its goals is a function of the congruence between various organisational components and if the components 'fit well', then the organisation functions more effectively. Strategic management literature often refers to alignment as 'fit' and endorses the notion that an organisation's strategy needs to address both external and internal environmental realities (Hillman, Withers & Collins, 2009, p. 1413; Meier, O'Toole, Boyne, & Andrews, 2010, p. 161). Regarding the alignment of internal organisational role-players, Joshi, Kathuria and Porth (2003, p. 353) implicitly theorised the requirement for 'strategic consensus' or 'alignment' of priorities throughout the organisation (strategic consensus is used interchangeably

with alignment by the cited authors). Burger (2017, p. 88) posited that organisations may improve the performance through employee contributions that are aligned with the demands of an organisation's strategic approach.

Executing the organisation's strategy entails determining the actions and behaviours that are required for an efficient strategy-supportive operation (Thompson et al., 2012, p. 377). Grant (2011, p. 122) pointed out that strategy is concerned with matching the organisation's resources (i.e. its execution abilities) to the opportunities that arise in the external environment. Thompson et al. (2012, p. 407) stated that an organisation's ability to allocate the resources required to support the strategy has a key impact on the execution process. Lankoski, Smith and Van Wassenhove (2016, p. 249) argued that if managers are choosing to allocate resources across multiple activities (objectives), decisions on resource allocation might well be different if managers consider stakeholder judgements rather than absolute performance measures, and recognise the possibility of reference states other than the existing state of affairs. Related to the above would be the concern from Sundin, Granlund and Brown (2010, p. 207) who commented that a shift towards a more stakeholder-oriented model of the organisation presents new management challenges on how to allocate resources to the competing priorities of stakeholders.

The comprehensive review by Burger (2017, pp. 82–105) on literature indicated various perspectives and overlapping concepts of organisational alignment (see Table 1). Rieley (2014, p. 6) came to a similar conclusion, commenting that organisational alignment means different things to different people and while almost all business leaders believe that alignment is important, the way that they think about it varies greatly. The current authors observed that there appears to be little academic research or practical guidance on how to effectively manage multiple, and at times conflicting, objectives that evolve from competing stakeholder interests. The first objective of the literature review was to guide the conceptualisation of the organisational alignment construct, its formative dimensions, as well as the operationalisation of its formative dimensions. As a second objective, the literature review was used as a guide to identify possible measurable variables of the formative dimensions. The third objective of the literature review was to identify factors that may affect organisational alignment.

From the review of the literature, Table 2 lists the identified enabling factors considered to be associated with perceived organisational alignment (Burger, 2017, p. 117). Correlation was expected between the degree of perceived organisational alignment and the respondents' biographical details, attitudes, opinions and judgements on the stated enablers,

TABLE 1: Organisational alignment studies.

Author(s)	Concept or perspective	Description or explanation
Porter (2008)	Fit	'Working together' of all organisational systems activities as a source of competitive advantage
Meier et al. (2010); Thompson and Strickland (1993); Hillman et al. (2009)	Fit	Strategy needs to be aligned with internal and external realities
Doty et al. (1999)	Fit	Consistency required between structure and contextual factors
Park et al. (2011); Fry and Smith (1987); Cunningham and Kempling (2011)	Fit	Micro-fit – strategy structure Macro-fit – organisation environment
Drazin and Van de Ven (1985)	Fit	Fit between strategy and structure
Meilich (2006)	Fit	Fit between environment, strategy and structure
Sousa and Tan (2015) citing Venkatraman & Camillus	Fit	Fit between internal business units' strategies
Powell (1992)	Alignment	Structure alignment with strategy
Burton and Moran (1995)	Alignment	Alignment of business and strategic plans
Patten (2015)	Alignment	'Aligned' implies informed staff, adaptive culture and effective resource allocation
Hammal and Prahalad (1993)	Alignment	Alignment related to the environment, resource allocation and long-term perspective
Roca-Puig and Bou-Llusar (2006); Beehr et al. (2009)	Alignment	Alignment of internal and external variables
Boswell (2006)	Alignment	Line-of-sight of all employees on strategic objectives
Collins and Porras (2005)	Alignment	Organisational elements 'work together' in context of the organisation's core ideology and the strategic picture
Iselin et al. (2008)	Alignment	Competitive strategy needs to match operational capabilities
Joshi et al. (2003) citing Skinner	Strategic consensus	Alignment of priorities right through the organisation
Tarigan (2005) citing Boyer and McDermot	Strategic consensus	Agreement on organisational priorities
Kellermanns et al. (2011)	Strategic consensus	Collective appreciation of the reasons behind strategic decisions
Lamberg (2009)	Strategic consistency	Actions are consistent with the organisation's history and external environment realities
Lillis and Sweeney (2013)	Strategic consistency	Competitive strategy needs to match organisational capabilities
Nadler and Tushman (1980; 1989)	Congruence	Organisation components need to fit each other, as well as the environment
Vancouver et al. (1994)	Congruence	Goal agreement between supervisors and subordinates
Colbert et al. (2008) citing Boswell et al. (2006)	Congruence	Dyadic goal importance congruence
Dignum and Dignum (2007)	Congruence	Congruence required between strategy, structure and environment
Nightingale and Toulouse (1977)	Congruence	Congruence required between the organisation's environment, management's values and interpersonal and intergroup processes
Williams (2002)	Link	'Link' required between strategy and culture

Source: Burger, F. J. (2017). *An organisational alignment framework to improve South African mining companies* (pp. 94–97). PhD-thesis, North-West University, Potchefstroom

namely culture, strategy, structure and systems, as well as with organisational variables listed in Table 2.

This broad framework also formed the basis for the development of the measurement model used to conduct structural equation modelling (SEM). Figure 1 illustrates the stated factors in context of the organisational alignment construct.

A conceptual framework of organisational alignment was hypothesised (see Figure 2) from the literature and consisted of four organisational alignment enabling categories of culture, strategy, structures and systems. Perceived organisational alignment was defined as a multidimensional construct with three formative dimensions of organisational purpose, stakeholder priorities and execution focus. Given that the six organisational alignment factors (which made up the three dimensions of perceived organisational alignment) were postulated as forming the construct of perceived organisational alignment; the researchers considered the possibility to model the six organisational alignment factors as the endogenous variables, as it may have been of practical value to determine the unique influence of each of the 11 organisational alignment enabling factors on each of the six organisational alignment factors.

However, as a degree of multi-collinearity was expected between the six organisational alignment factors (and found to be the case), the parsimony principle when modelling variables would not have been adhered to. It was therefore decided to consider the aggregate organisational alignment construct as the endogenous variable (as the construct is being formed by the six organisational alignment factors), while the eleven enabling factors were modelled as the exogenous variables.

TABLE 2: Potential factors influencing organisational alignment.

Number	Factor	Definition	Measureable variables
1	Organisational variables	Characteristics pertaining to the respondent's organisation	Mining sector, organisation ownership status, staff numbers and management levels
2	Biographical variables	Personal detail	Age, gender, population group, qualifications, functional department, number of direct reports, number of organisations worked for and number of positions held, management level, tenure, intention-to-stay and equity stake
3	Culture	Normative and descriptive values and behaviour, leadership behaviour and change	Value congruence, organisational change, decision-making style, employee voice, normative socio-economic responsibilities and conflict handling
4	Strategy	Planning and control processes	Balanced nature of objectives and goals, trade-off between goals, anticipation of macro-environmental changes, clarity of objectives and goals, stakeholder voice and participation in planning processes
5	Structure	Decision-making authority, organisational levels and structure flexibility	Opinions and attitudes on goodness-of-fit or degree of enablement of organisational structure, decision authority and dynamic structuring
6	Systems	Processes and systems enabling alignment	Opinions and attitudes on performance management and reward, information and budgeting systems

Source: Burger, F. J. (2017). *An organisational alignment framework to improve South African mining companies*. PhD-thesis, North-West University, Potchefstroom

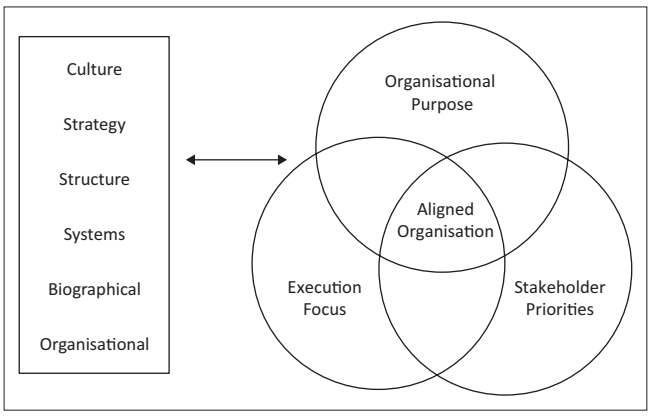

FIGURE 1: Context of organisational alignment enablers.

Research design and methodology

The overall objective of the study was to propose a framework of organisational alignment and to make recommendations that will improve South African mining organisations' alignment capability. The objectives of the literature review were to guide the conceptualisation of the organisational alignment construct, its formative dimensions, as well as the operationalisation of its formative dimensions. The review on literature was also used to guide the identification of measurable variables of the formative dimensions. Lastly, the literature review was used to guide the identification of possible factors that may affect organisational alignment.

The overall classification of this study was cross-sectional, descriptive and correlational research. A quantitative approach regarding data collection was decided on implying that data related to the research problem were coded and quantitatively tabulated and analysed. A rigorous questionnaire development process focussing on content validity was followed that involved numerous role-players who included managers within the South African mining industry, a management consulting company, as well as individuals with academic research experience. The input from a focus group, consisting of managers from one of the target population organisations, was also obtained. An emailed online questionnaire was subsequently piloted to address any remaining concerns.

Managerial levels within mining organisations were selected as the target population. The target population was further defined as South-African-based mining organisations with operations in the Southern Africa region. A non-probability-convenience sample of 996 was taken from a list of operational South-African-based mining organisations' management contact details sourced from a third party. Two-hundred and eighty-six responses were received corresponding to a 28.7% response rate. The survey instrument's face validity was

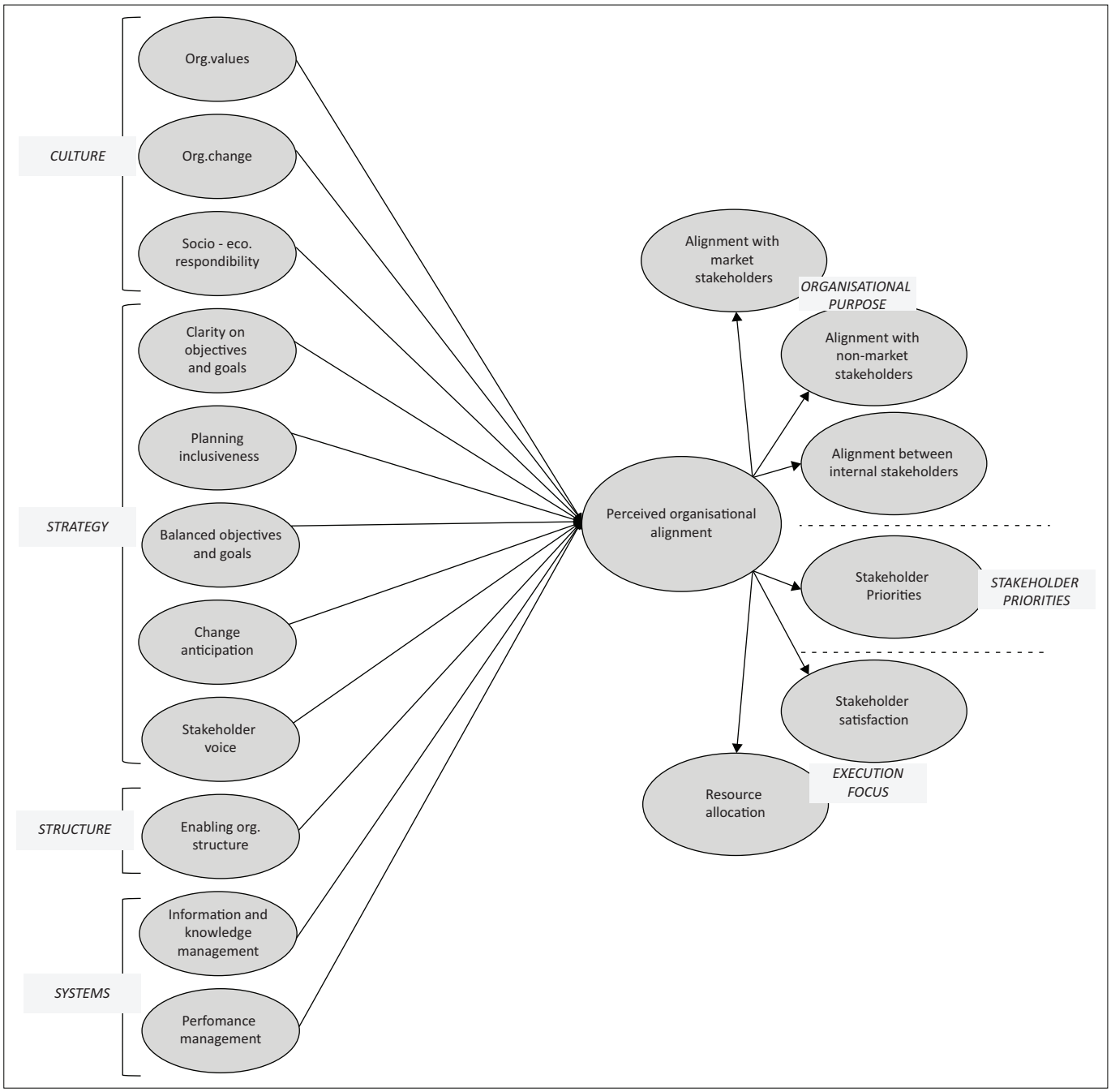

FIGURE 2: Framework of organisational alignment.

assessed during the pre-testing stage in collaboration with industry role-players, while an extensive measurement development process was applied to ensure maximum content validity. The final questionnaire comprised 98 ordinal-scaled statements that captured the responses on a six-point Likert scale.

To assist in the substantive interpretation of the response data (Diamantopoulos & Schlegelmilch, 2000, p. 216), the process of exploratory factor analysis was applied to identify the structure and factors of each enabler, as well as the formative dimensions of the organisational alignment construct and entailed the following: (1) the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was used to determine whether sufficient data were available to conduct exploratory factor analysis; and (2) to determine whether sufficient correlation between variables is present, Bartlett's test of sphericity was conducted. In all cases, the internal consistency reliability (Cronbach's alpha), suitability for multivariate analysis (Bartlett's test of sphericity) and the KMO measure of sampling adequacy were calculated and confirmed that the questionnaire developed from the literature review provided a valid data collection instrument:

> Not all factors were retained during exploratory factor analysis and the process of extraction was followed to decide how many factors should be retained, it was important to ensure that the factors made theoretical sense and that the percentage of total

variance explained by the extracted factors was sufficient. Once the factors were extracted, factor rotation was conducted to discriminate more clearly between factors. To determine the internal consistency reliability of the factors, Cronbach's alpha coefficients were calculated for each factor as a method of estimating the reliability and internal consistency among the statements (Field, 2013, p. 873).

The study's statistical analysis consisted of univariate and multivariate techniques. Univariate analysis was applied to describe the general properties per individual statement or question and included frequency distribution in percentages, central tendency in arithmetic mean and range in standard deviation. The Spearman's rank-order (rho) correlation multivariate analysis technique was applied to test the strength of the relationship between the ordinal variables because the technique does not rely on the assumptions of a parametric test (Field, 2013, p. 884). *T*-tests for the equality of means between groups and ordinal data statements were applied to compare the factor means of two different groups of respondents. However, as the study's sampling process was described as non-probability-convenience and therefore not random, *t*-values and *p*-values were not necessarily relevant. *Effect size* was subsequently used to determine the practical significance of associations and comparisons. Cross-tabulations and chi-squared tests were used to compare statements and questions that consisted of categorical data (Bhattacherjee, 2012, p. 125).

In the social sciences, a theory can be considered a system for explaining a set of behaviours that specifies and relates certain key concepts that are present in the behaviour (Holton & Lowe, 2007, p. 297). The authors continued by explaining that theory is an attempt to model some aspect of the empirical world. The motive for this modelling is that the real world is often so complex that it requires to be conceptually simplified in order to understand it, or that observation by itself does not reveal adequately ordered or explainable relationships. The factor analysis stage was 'exploratory' in nature, the aim being to identify the latent relationships underlying a set of measured variables by reducing it to a more manageable set of variables. The correlations among the identified factors were determined and contributed to a large extent in addressing the research problem and subsequent research objectives.

The SEM process, largely based on Hancock and Mueller's (2010, p. 49) suggested stages, was followed: (1) initial model specification, (2) parameter estimation (the *maximum likelihood method* was used and the resultant standardised regression coefficients reflect the relative unique influence each of the organisational alignment enabling factors [exogenous variables] had on the level of perceived organisational alignment [endogenous variable]); (3) data-model fit assessment and (4) interpretation of parameter estimates (interpretation of each parameter's unique contribution to perceived organisational alignment).

Ethical consideration

Ethical clearance was received from the Workwell: Research Unit for Economic and Management sciences, North-West University: Nr 2414 0732.

Interpretation of results

Perceived organisational alignment

The ***organisational purpose*** dimension of perceived organisational alignment was explained by three factors, namely: 'alignment with market stakeholders' (Cronbach's alpha coefficient of 0.738); 'alignment with non-market stakeholders' (Cronbach's alpha coefficient of 0.831) and 'alignment between internal stakeholders' (Cronbach's alpha coefficient of 0.605). On average, managers believed that their organisations' objectives and goals were aligned internally, as well as with their market and non-market stakeholder constituencies. However, growing expectations for more involvement related to the functioning of the organisation, from market stakeholders, as well as non-market stakeholders, will impact the degree of internal alignment and may increase tension among managers. This tension, however, should be viewed as constructive because addressing it may lead to increased adaptation with the organisation's external (macro-) environment.

The ***stakeholder priorities dimension*** was explained by one factor (Cronbach's alpha coefficient of 0.701) and indicated a high level of perceived agreement between managers on the relative priorities of internal and external stakeholders. Organisations should consider formalising the prioritisation of stakeholders more. Improved agreement levels on stakeholder priorities should also result in more effective allocation of resources.

The ***execution focus dimension*** of organisational alignment was explained by two factors, namely: 'stakeholder satisfaction' (Cronbach's alpha coefficient of 0.827) and 'resource allocation' (Cronbach's alpha coefficient of 0.656). On average, managers not only were inclined to indicate internal agreement on resource allocation but also tended to be of the opinion that their stakeholders were satisfied with the outcomes of their organisations' application of resources. Managers, on average, indicated that an overall organisational objective to 'increase the satisfaction of all stakeholders' should be favoured more versus an organisational objective of 'only focussing on shareholder satisfaction'.

An index is a composite score derived from aggregating measures of a construct and is appropriate to use when there are several dimensions of a concept present and is especially suited when a construct is defined as an aggregate multidimensional construct (Bhattacherjee, 2012, p. 52). A Confirmatory Factor Analysis (CFA) on these three dimensions yielded acceptable fit indices with a comparative fit index (CFI) of 0.97 (>0.9: good) and a chi-square divided by its degree of freedom ratio of 2.83 (0: perfect fit; 5: poor fit).

The root mean square of error approximation (RMSEA) was 0.080 (< 0.10: acceptable) and had a 90% confidence interval of [0.044; 0.118].

Enablers of perceived organisational alignment

The ***culture-related enabler*** of organisational alignment was explained by two factors, namely 'organisational values and change' and 'socio-economic responsibility' (Cronbach's alpha coefficient of 0.655). The former factor was subsequently further divided into two sub-factors, namely 'organisational change'(Cronbach's alpha coefficient of 0.716) and 'organisational values' (Cronbach's alpha coefficient of 0.670). All three factors had significant positive correlations with the organisational alignment index. Except for the 'socio-economic responsibility' factor's non-significant correlation (Spearman's rho 0.066) with the 'resource allocation' factor, the three culture-related factors correlated positively with each of the six organisational alignment factors. In particular, the 'organisational values' had a large correlation (Spearman's rho 0.668) with the organisational alignment index. Managers on average found the aspects related 'organisational change' to be a challenge (managers expressed the need for accelerated change but also stated that balancing continuity and change is a challenge).

The ***strategy-related enabler*** of organisational alignment was explained by five factors, namely: 'balanced objectives and goals' (Cronbach's alpha coefficient of 0.849), 'change anticipation' (Cronbach's alpha coefficient of 0.779),'clarity on objectives and goals' (Cronbach's alpha coefficient of 0.777),'planning inclusiveness' (Cronbach's alpha coefficient of 0.760) and 'stakeholder voice' (Cronbach's alpha coefficient of 0.823). All five factors showed statistically significant positive correlations with the organisational alignment index, as well as with each of the six organisational alignment factors. The 'balanced objectives and goals' factor's correlation (Spearman's rho 0.726) with the organisational alignment index, as well as with each of the organisational alignment factors implies that perceived organisation alignment will be improved when the requisite balance of objectives and goals is pursued. The 'change anticipation' factor can be viewed as complementary to the aforementioned factor, as the anticipated changes in the organisation's environment are used as input to the development of more balanced objectives and goals. Although managers on average indicated their comfort to manage the trade-offs required between multiple objectives and goals, the 'clarity on objectives and goals' factor's correlation (Spearman's rho 0.609) suggests that to enable organisational alignment, management should ensure that the organisation's overall objective, as well as the associated managerial roles and accountabilities are clear. Although organisations cognitively function in an open system, it needs to be operationally closed to be efficient. Within this context, the 'planning inclusiveness' factor's correlation (Spearman's rho 0.323) means that constant alignment is required on what the internal customer demands are, as well as what internal supplier and support services are required. Coupled to all the above mentioned factors is the 'stakeholder voice' factor. It may be argued that the factor's relatively large correlation with the organisational alignment factors (Spearman's rho 0.662), as well as with the balance of the strategy-related factors implies that organisational alignment commences with the determination of stakeholder requirements – a view consistent with the discussion in section by Neely, Adams and Crowe (2001)

The ***structure-related enabler*** of organisational alignment was explained by one factor and was labelled 'enabling organisational structure' (Cronbach's alpha coefficient of 0.583). Based on the review of the literature and the positive correlation (Spearman's rho 0.466) with the organisational alignment index, as well as with each of the organisational alignment factors, the 'enabling organisation structure' factor should be considered as an enabler of organisational alignment. The structure-follows-strategy debate is irrelevant according to Atkinson (2006, p. 1444). The respective authors mentioned that organisations need to merely acknowledge the need for a clear fit between strategy and structure, that is, strategy-structure congruence in the context of the operating environment. Interpreting 'operating environment' as the socio-economic and political expectations of external, as well as internal parties affecting (and being affected by) the value-creating process of the organisation, the researcher is of the opinion that the structure-follows-strategy debate *is* relevant, especially in the context of this study.

The ***systems-related enabler*** of organisational alignment was explained by two factors, namely 'performance management' (Cronbach's alpha coefficient of 0.863) and 'information and knowledge management' (Cronbach's alpha coefficient of 0.727). On average, managers agreed with all the factor statements. Although the 'information and knowledge management' factor mean was calculated as 2.88, at statement level, managers on average indicated that 'organisational knowledge is *not* retained, captured, updated and transferred over time in a systematic way'. The two factors correlated positively with the organisational alignment index (Spearman's rho 0.635 and 0.561, respectively) as well as with each of the organisational alignment factors.

Influence of organisational alignment enabling factors on perceived organisational alignment

Except for the non-significant correlation between culture factor 3 (socio-economic responsibility) and execution focus factor 2 (resource allocation), the 11enabling factors had significant positive correlations with the organisational alignment index, as well as with each of the six organisational alignment factors. However, to further address the research problem and research objectives, SEM was applied to answer which of the identified organisational alignment enabling factors had a unique or specific

influence on the multidimensional construct of perceived organisational alignment.

Three tests were applied in order to assess model-data fit (model-data fit tests indicate to what degree the parameters of the model combined to estimate a population covariance matrix that is highly similar to the sample covariance matrix). The chi-square divided by its degree of freedom ratio was 1.914 (0: perfect fit; 5: poor fit). The RMSEA was 0.057 (<0.06: good) and had a 90% confidence interval of [0.053; 0.060]. While both the aforementioned tests evaluate the overall discrepancy between observed and implied covariance matrices, the RMSEA test also takes into account the model's complexity or precision (referring to the confidence interval). The CFI was calculated at an acceptable 0.852 (>0.9: good).

The SEM in Figure 3 illustrates the theorised set of relations (parameters) between the 11 organisational alignment enabling factors and the multidimensional construct of perceived organisational alignment. Each organisational alignment enabling factor's standardised regression coefficient on organisational alignment was calculated by controlling for, or taking into account the correlations with all other organisational enabling factors. Furthermore, standardised regression coefficients (ß) correspond with effect size estimates and were subsequently used for comparisons of the organisational alignment factors (parameters). Two of

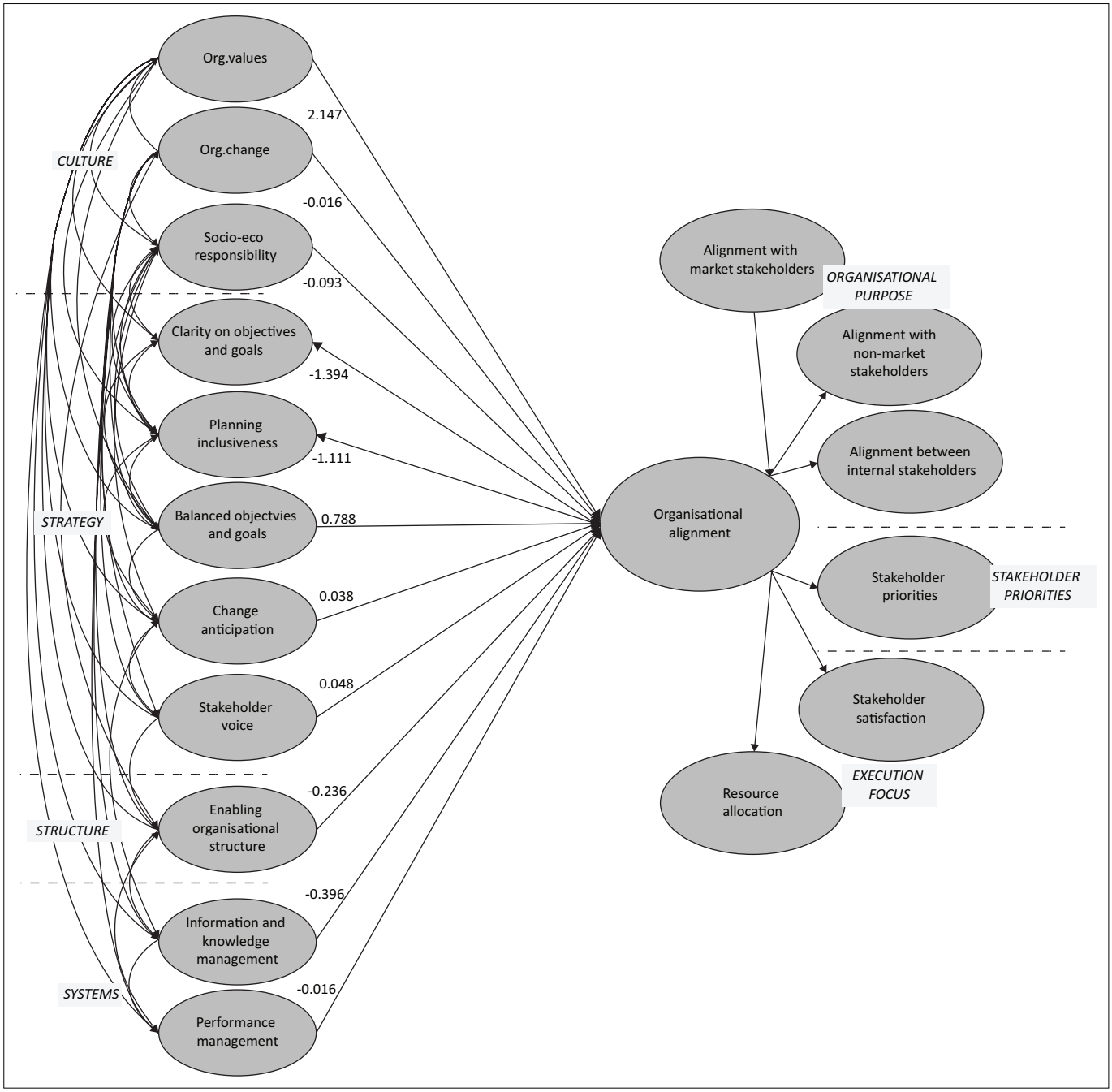

FIGURE 3: Standardised regression coefficients of organisational alignment enabling factors on perceived organisational alignment.

the 11 organisational alignment enabling factors indicated a positive unique influence of practical importance on perceived organisational alignment (positive standardised regression coefficients larger than 0.2 indicated in bold).

Although the 11 enabling factors all correlated positively with the perceived organisational alignment construct, the following factors indicated a negative unique influence of practical importance on perceived organisational alignment (negative standardised regression coefficients larger than 0.2 indicated in bold in Figure 3): 'clarity on organisational objectives and goals' (ß:-1.39), 'enabling organisational structure' (ß:-0.24) and 'information and knowledge management' (ß:-0.4).This was because of the correlations between the enabling factors that resulted in a suppression effect.

The enabling organisational structure factor correlated positively with organisational alignment (Spearman's rho 0.466), that is, managers' positive opinions on the enabling nature of organisational structures correlated with positive opinions on organisational alignment. The factor's unique influence on organisational alignment was, however, negative (ß:-0.236). Theoretically, this negative estimate should not be interpreted in a predictive sense, such as the less a manager agrees with the suitability of organisational structures, the higher will be perceived organisational alignment.

The interpretation of the estimate should be explanatory, that is, when holding the balance of enabling factors constant, enabling organisational structure correlated negatively with organisational alignment, implying that in the presence of all other enabling factors, further increasing enabling organisational structure may have a negative impact on perceived organisational alignment.

The same reasoning and subsequent deduction can be made for the information and knowledge management factor. The factor correlated positively with organisational alignment (Spearman's rho 0.561) but indicated a unique negative influence (ß:-0.396). It is therefore posited that in the presence of all other enabling factors, further increasing information and knowledge management may have a negative impact on perceived organisational alignment.

The clarity of objectives and goals factor's unique negative influence was probably the biggest surprise. The factor showed a large positive correlation with organisational alignment (Spearman's rho 0.453) but showed a unique standardised regression coefficient of -1.394. The latter finding indicates that, in the presence of the balance of factors, further increasing clarity of objectives and goals may have a negative impact on perceived organisational alignment.

Managerial implications

The first set of recommendations concerns the following factors: 'organisational values', 'stakeholder voice' and 'clarity of objectives and goals'. All three factors showed above-median correlations with perceived organisational alignment, as well as above-median on average agreement levels on the factors' statements. Furthermore, the 'organisational values' factor had a unique *positive* influence of practical importance on organisational alignment, whereas the 'clarity of objectives and goals' factor showed a unique *negative* influence of practical importance on organisational alignment.

The following are recommended for organisational values:

- Emphasise the importance of intra-organisational value congruence (Howell, Kirk-Brown, & Cooper, 2012, p. 740).
- Develop normatively desired behaviour representative of not only internal stakeholders but also increasingly taking external stakeholder views into account (Carroll & Buchholtz, 2012, p. 158).
- Frequently assess inconsistency between advocated and perceived behaviour and ensure consequences resulting from negative variation, as well as strengthening of positive behaviour (Howell et al., 2012, p. 740).
- Increase transparency by communicating organisational objectives, as well as organisational performance to a wider range of stakeholders in order to strengthen trust levels (Lazenby, 2007, p. 28).
- Encourage managers to create a work environment more conducive to an enhanced 'employee voice' (Burris, 2012, p. 851).

From a values and behaviour-related perspective, the above recommendations should contribute towards organisations' ability to improve internal value congruence, as well as its ability to increasingly align with market and non-market stakeholders (the latter point will become increasingly relevant within the South African mining industry). As explained earlier, the 'organisational values' factor indicated a positive unique influence on perceived organisational alignment, suggesting that further organisational values-related efforts to improve perceived organisational alignment will most probably be beneficial.

The following are recommended for stakeholder voice:

- Include the on-going identification of all stakeholder groups (market and non-market stakeholders) in the organisation's strategic management processes (Neely et al., 2001, p. 7).
- Determine stakeholder needs and expectations on a routine basis (Neely et al., 2001, p. 7).
- Apply criteria of legitimacy, urgency and power to prioritise and re-prioritise stakeholders (Carroll & Buchholtz, 2012, p. 67).
- Include stakeholder satisfaction as an integral part of organisational performance reporting (Neely et al., 2001, p. 7).

The recommendations should formalise stakeholder 'voice' during all of the organisation's value creation stages, further enhancing organisations' ability to effectively align resource allocation with stakeholder expectations.

The following are recommended for clarity on objectives and goals:

- Acknowledge that complete clarity of objectives and goals may be considered more as a moving target and therefore rather as an emergent state, instead of an absolute condition (Sabherwal, Hirschheim, & Goles, 2001, p. 179).
- Recognise that in certain instances, a pedantic drive towards clarity on objectives and goals may inhibit creativity, make strategy inflexible and may distort risk preferences because of a too narrow focus (Ordonez, Schweitzer, Galinsky, & Bazerman, 2009, p. 6).
- Improve goal clarity by placing more emphasis on understanding cause-and-effect relationships between objectives (Foss & Lindenberg, 2013, p. 85).
- Increase the extent of a 'bottom-up' establishment of objectives and goals (Thompson & Strickland, 2012, p. 68).

The second set of recommendations involves the following factors: 'balanced objectives and goals', 'performance management', and 'information and knowledge management'. While all three factors showed median or above-median correlations with perceived organisational alignment, they had median or below-median on average agreement levels on the factors' statements. Furthermore, the 'balanced objectives and goals' factor showed a positive unique influence of practical importance, whereas the 'information and knowledge management' factor showed a unique negative influence of practical importance on perceived organisational alignment.

The following are recommended by the authors for balanced objectives and goals:

- Adhere to the principle that internal organisational variety (complexity) needs to match the extent of the external variety (complexity) imposed on the organisation.
- Furthermore, the requisite internal variety needs to be reflected in the organisation's scope of objectives and goals.
- Recognise that 'variety' refers to the range *and* dynamic nature of market and non-market stakeholder needs and expectations.
- Develop overall organisational objectives and goals that are most likely to promote joint production.

The organisation's ability to balance its strategy and ensure alignment of all functions within the organisation will be the key to sustainable performance. Developing objectives and goals that coherently address the expectations and needs of all stakeholders are therefore required.

The following are recommended by the authors for performance management:

- At operational performance management level, significantly increase the range of stakeholder groups' satisfaction that a manager needs to contribute towards.
- Increase the weighting of collective objectives and goals in managers' individual performance contracts.
- Ensure that all forms of reward and recognition complement the selected weighting referred to above.
- Ensure that cause-and-effect relationships between the allocated stakeholder satisfaction responsibilities of each manager are understood and agreed.
- Emphasise and practise the principle that the efficacy of resource allocation and utilisation are essentially the barometer of organisational performance, implying that robust links are required between strategy formulation (setting of objectives and goals) and strategy execution (budgeting or resource allocation and utilisation).

Performance management should be viewed as a process of *managing the relationships* that affect the achievement of the organisation's objectives and goals.

The following are recommended for information and knowledge management:

- Ensure that the information and knowledge management system supports an increasing stakeholder management perspective – this may include the capturing and dissemination of trends in stakeholder expectations, as well as stakeholder satisfaction indices.
- Create an incentive for managers to contribute to the development and maintenance of the above-suggested by, as suggested as part of the recommendations on the 'performance management' factor, ensuring that a larger component of managers' performance contracts, not only relates to their 'immediate' internal stakeholders' satisfaction, but also includes the balance of the organisation's stakeholders.
- Place more emphasis on information and knowledge management's role as an enabler of organisational adaptation (and learning) to changing stakeholder expectations.

A precipitous increase in expectation that managers should take more responsibility for stakeholder satisfaction may expose their inability to make rational and appropriate decisions because of a lack of information. Improving the stakeholder management-related functionality of the information and knowledge management system will address the aforementioned concern, a situation that Alvesson and Spicer (2012, p. 1197) referred to as 'bounded rationality'.

Although this study limited the assessment of planning inclusiveness to the manager's internal suppliers and internal customers, the recommendations stated above can be applied to a broader collection of internal stakeholders. Increased planning inclusiveness will also necessitate a more relations-oriented perspective on the role of a manager, a view supported by Yukl (2013, p. 70). The organisational alignment enabling characteristic of organisational structures should be improved from a stewardship theory perspective, that is, formal relationships should be structured in such a way as to

establish a collectivist culture, low-power distances and a high involvement-oriented situation (Burger, 2017, p. 278).

As organisations function within an open system, the organisational structure should be seen as the formal pattern that guides the internal-to-organisational relationships, *as well as* the external relationships (Burger & Pelser, 2018, p. 150). The organisational structure's organisational alignment enabling value should therefore be assessed only in the context of the use of the structure to contribute to the sustainable creation of value as perceived by *all* stakeholders. The above mentioned principles and recommendations are in support of DeVilbiss and Gilbert's (2005, p. 62) views that a learning organisation pro-actively responds to outside stimuli and changing conditions as its *collective consciousness* creates an efficient and effective organisation that will adapt timeously to changing stakeholders' needs and focus the necessary resources to respond.

Wider contribution

Currently, the accountability for the management of stakeholders is heavily slanted towards executive management levels. This study has broadened the debate on the evolving leadership role of a manager within organisations as increasingly one of *managing relations*. This study provides a pivotal tool of incrementally and in a structured way, decentralises accountability to all levels of management across different industry types, organisation types and sizes, as well as other countries.

Study limitations

Various concepts and perspectives of organisational alignment could be found during the review on the literature. While the researcher is confident that the construct of perceived organisational alignment was adequately conceptualised, it is conceivable that different operationalisation thereof may be advanced. Although the study's empirical stage was quantitative in nature, extensive time and resources were expended to develop the questionnaire. However, against the background of the above mentioned limitation, the researcher is mindful that a mixed-method research approach may have further addressed any uncertainty on the validity of the developed construct, as well as the enabling factors.

Future research

This study defined an *aligned organisation* as an organisation that is able to meet the expectations of its stakeholders in a sustainable way. A case study approach in which the perceptions of a mining organisation's external stakeholders are included as the unit of analysis may provide invaluable insight into the efficacy of the complete value creation efforts of the organisation. Because of the fact that the questionnaire was anonymous, this study did not compare managers' answers with those of their actual superiors or their subordinates. At a micro level, a dyadic study may unearth additional insights into perceived organisational alignment within organisations. Lastly, while the review of the literature referred to the intuitive link between organisational alignment and performance, a study to compare organisations' performance levels with perceived organisational alignment may further substantiate the posited framework of organisational alignment.

Conclusion

This study set out to determine the degree of perceived organisational alignment and to make recommendations to improve South African mining organisations – a study that has to date not been undertaken. A thorough review of literature and an extensive questionnaire development phase resulted in the conceptualisation and operationalisation of a multidimensional construct of organisational alignment. The key contribution of the developed multidimensional organisational alignment construct was that it effectively incorporated a view on the alignment that has to date not been at the forefront of mining organisation practices. The construct will result in a broader perspective of the role of managers to create and trade value *more inclusively of all the organisation's stakeholders*. This perspective should also challenge organisations to look beyond a moral-based motivation of stakeholder involvement and to acknowledge the organisational survival imperative of the increased importance of stakeholders.

This study not only presented a concept of perceived organisational alignment and associated enabling factors but also provided a wide range of recommendations on how each of the enabling factors can be leveraged in order to improve perceived organisational alignment. Currently, the accountability for the 'management' of stakeholders is heavily slanted towards executive management levels. This study will broaden the debate on the evolving leadership role of a manager within South African mining organisations as increasingly one of 'managing relations'. This study should furthermore allow organisations to, incrementally and in a structured fashion, decentralise the previously stated accountability to all levels of management. As a closing remark, mining organisations in South Africa need to move from one of extraction and exploitation to one of shared endeavour, a dispensation where all relevant stakeholders are more actively involved in the value creation and trade processes.

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Competing interests

The authors have declared that no competing interest exist.

Author's contributions

F.J.B. was a researcher and doctoral student. T.G.P. was a supervisor and manuscript writer. S.E. was a co-supervisor and statistical editor.

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Data availability statement

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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