

Investigating the planning and administration competencies of managers in manufacturing businesses

Z STEYN

School of Business Management, North West University, Potchefstroom
zandri28@gmail.com

LJ VAN STADEN *

School of Business Management, North West University, Potchefstroom
louis.vanstaden@nwu.ac.za * *corresponding author*

Abstract

Planning and administration as managerial competencies of managers in manufacturing businesses are important for effective management due to the continuous evolving business environment. This study aimed at measuring the extent of planning and administration competencies of managers in the manufacturing industry. Variables investigated were information-gathering and problem-solving, planning and organising, time management, and budgeting and financial management.

The sample consisted of 343 respondents from 67 different manufacturing businesses in four provinces of South Africa. A quantitative, descriptive research design was implemented, while a non-probability sampling technique was applied. The data were collected through a self-administered questionnaire compiled by the researchers.

Results indicated that managers revealed a good to very good level of planning and administration competency which embraced information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management skills.

Further to this, a significant and positive relationship exists between managers' information-gathering and problem-solving, as well as planning and organising competencies, and also between managers' time management, and budgeting and financial management competencies. The main contribution of this study is that if managers have good knowledge of the identified competencies and associated key elements they can enhance their personal and business performance.

Key phrases

manufacturing businesses; managerial competencies; managers; planning and administration

1. INTRODUCTION

Industry growth rates depend on many factors, and the South African manufacturing industry is no exception. The state of the local and global economy and the rand exchange rate are some of the factors that are watched closely when assessing the performance of manufacturing production (Stats SA 2016:1). Given this unstable and strong dynamism, businesses encountered an unpredictable environment characterised by increasing changes in technologies, several differences in client demands, as well as changes in the global environment, therefore managers is to learn new things daily to keep up with the changing environment (Lazenby 2015:15-16). Manufacturing is no longer about just producing physical products. Many challenges such as changes in consumer demand, the nature of products, the economics of production, and the economics of the supply chain have led to a fundamental shift in the way manufacturing companies execute their business (Hagel, Brown, Kulasooriya, Giffi & Chen 2015:1).

Furthermore, South Africa has developed areas but likewise reduced infrastructure. Statistics South Africa (Stats SA) (2016:3) reports that the principal constructive contributor to growth in Gross Domestic Product (GDP) in the second quarter of 2016 was manufacturing. Furthermore, Stats SA indicated a growth of 8.1% in the number of manufacturing industries, which contributed 1.0% to GDP. This is mainly due to noticeable increases in the areas of petroleum products, chemicals, plastic and rubber (Stats SA 2016:3).

Considering the value of the manufacturing industry in the South African economy, establishing the degree of the importance of managerial competencies and the inevitability of being aware and developing these competencies became an important subject of managerial competency investigation, which also bears relevance to the Small Enterprise Development Agency (SEDA) (2012:14). Businesses will not be able to succeed without competent managers (Williams 2014:24). Having competent managers not only enables an improved work environment, but additionally supports the improvement of the business success as a whole.

For this reason, numerous businesses generated an urgency to develop their managerial competencies in order to allow managers to advance superior performance in their

corresponding profession (Sahoo 2014:143). As a result of the current developing, improving and changing environment, added focus is on the characteristics of managers and their competencies, since they are considered an important determinant in obtaining a sustainable competitive advantage (Hellriegel, Slocum, Jackson, Louw, Staude, Amos, Klopper, Louw, Oosthuizen, Perks & Zindiye 2012:23).

Every organisation needs effective managers to be successful in today's highly competitive and dynamic business environment. Good managerial competencies can give companies the necessary competitive advantage over their competitors (Veliu & Manxhari 2017:59). In other words, managerial competencies provide the basis upon which effective management is shaped.

Hence the focus is on aligning managerial competencies with the internal and external environmental factors which manufacturing managers come across, so as to avoid any uncertainties (Campbell *et al.* 2011:156).

Wanza & Nkuraru (2016:191) emphasise the importance of managerial influence on businesses' ability to adapt to the changing dynamic environment by stating that if the managers are capable and competent the process of organisational change will be more effective and successful. Manufacturing businesses – especially in South Africa – need to adopt strategic flexibility to counterbalance the internal and external pressure presented at a frequent level. The increasing growth of the number of manufacturing businesses poses further challenges, as they remain the core driver of Gross Domestic Product (GDP) and employment, resulting in a crucial need for managers to become and remain aware of their competitors and retain a competitive advantage (Zalk 2014:1).

2. PROBLEM STATEMENT

The continuous changing environment and increased competition among manufacturing businesses pose enormous challenges for managers to deal with (SEDA 2012:4). In a study by Edwards and Jenkins (2015:452) it was found that Chinese competition has had a significant impact on the South African manufacturing industry and that most of the increase in Chinese penetration of the South African market has been at the expense of local

production. Strategies need to be developed to ensure a well-established and diverse base of South African products which, in addition, are globally competitive.

Dogra (2012:2) explains the difference between excellent and ordinary managers as the ability of the first-mentioned to use their competencies effectively to adapt to this fast-changing environment, as opposed to that of the ordinary managers. Campbell *et al.* (2011:157) points out that the manufacturing industry, especially within South Africa, faces increased competition; therefore a manager should be capable of keeping up with the rapidly changing environment.

Many management thinkers believe that planning and administration of operations are the most fundamental responsibilities of managers in the manufacturing industry (Bhardwaj 2016:47). Lech (2012:967) underlines that management faces major dilemmas in terms of the amount of time, resources and information-gathering methods they use for effective planning and organising, which could benefit significantly effective administration.

Due to the evolving nature of manufacturing businesses it has become critical for managers to apply successful planning and administration competencies, especially if they wish to increase competitiveness in the market and create a good working environment for their employees (Kalliath & Kalliath 2012:730).

According to Olaoye & Saheed (2016:28) practicing managers need to be competent in basic financial management because among the most crucial decisions in a business are those which relate to finance. Understanding of the theory of financial management provides business managers with conceptual and analytical insights to make such decisions skilfully.

Applying these competencies will lead to schedules being followed without any complications, consequently reaching the set goals and objectives on schedule and completing these within the allocated budget (Whetten & Cameron 2011:122). It is therefore necessary for managers to sharpen their planning and administration competencies so as to keep abreast of the ever-changing challenges in the manufacturing industry. The research question was: 'What is the extent of planning and administration competency of managers in the manufacturing industry?'

3. RESEARCH AIM AND OBJECTIVES

The primary aim of this research is to measure the extent of planning and administration competencies of managers in the manufacturing industry.

Leading from the primary aim, the secondary objectives were to:

- determine a limited demographic profile of the respondents;
- measure managers' information-gathering and problem-solving skills, as contributors to their planning and administration competency;
- determine managers' planning and organising skills, as contributors to their planning and administration competency;
- identify managers' time management skills, as contributors to their planning and administration competency; and
- measure managers' budgeting and financial management skills, as contributors to their planning and administration competency.

Directed by the literature research conducted, the following alternative hypotheses have been formulated for this current study:

H1: There is a significant and positive relationship between managers' information-gathering and problem-solving skills and planning and organising skills, as contributors to the planning and administration competencies.

H2: There is a significant and positive relationship between managers' time management skills and budgeting and financial management skills, as contributors to the planning and administration competencies.

4. LITERATURE REVIEW

Referring to Henry Fayols' theory of management (1949), which still fits well within the current management theories (Rahman 2012:35), management is seen to be the method of using business resources to achieve business goals through planning, organising, leading and controlling (Lazenby 2015:3; Williams 2014:5-6). Schermerhorn (2013:4-5) states that a hierarchy exists in management which is presented from top to bottom for three categories, namely top, middle and first-level managers.

For purpose of this research the focus is on top and middle-level managers. Lazenby (2015:5) refers to top-managers or executive management as the highest level of the organisation and are responsible for making decisions and establishing goals and plans that affect the entire organisation. These managers are thus accountable for providing strategic direction and strategic planning (Schermerhorn 2013:5), whereas middle-level managers are responsible for finding the best ways to achieve organisational goals as effectively and efficiently as possible by implementing the policies and strategic plans (Lazenby 2015:5).

With regard to management, Mitchelmore and Rowley (2010:92) explain that the link between management competencies and the success and development of a business is vital. People are considered competent managers when they are able to demonstrate that they are capable of achieving goals within the specific occupation.

Competency, as Sahoo (2014:44) describes it, includes attributes such as knowledge and personal characteristics an individual possesses with the aim of achieving particular outcomes within the business. The application of these competencies supports the maximisation of productivity, and guides employees to perform their tasks effectively (Sahoo 2014:44). It is essential for managers to be competent in communication, planning and administration, teamwork, strategic direction, global awareness, emotional intelligence and self-management (Hellriegel *et al.* 2012:30). For purposes of this article the focus is on the planning and administration competencies of top and middle-level managers. The managerial competencies on which this research focused are displayed in the conceptual framework (Figure 1).

4.1 Planning and administration competencies of managers

Planning is referred to as developing business goals and objectives, and determining how it will be achieved (Nieman & Bennett 2014:189). In other words, planning is often seen as the first step in the management process since other management roles are subject to planning. Administration competency involves the skill of managers to be able to manage several employees in order for them to perform together effectively and achieve departmental objectives to ultimately reach business goals.

It is therefore essential to possess the skill to manage diverse types of employees (i.e. culture and personality) and arrange tasks for the employees to work effectively towards the

business goals or towards the accomplishment of the objectives of the department (Cunningham & De Kock 2012:119).

Strydom, Bruwer, De Beer, Holtzhausen, Kiley, Maritz, Nieuwenhuizen, Oosthuizen, Rudansky-Kloppers, Steenkamp (2015:55) confirm that planning is the first action to be taken in any management process and therefore it usually comes to mind when considering management. Planning and administration competency has four sub-dimensions namely, information-gathering, problem-solving, planning and organising projects and activities, time management, and budgeting and financial management (Bhardwaj, 2016:47). These skills are of importance to this research and are subsequently discussed.

4.2 Information-gathering and problem-solving

Information-gathering involves an on-going investigation and resource gathering through wide-ranging reading, and working with individuals in unrelated fields produces new knowledge (Kuratko 2014:153). In other words, this concept is referred to as obtaining resources in order to gain the best value from existing information for a specific purpose. Information-gathering is essential when managers face important decision making within a business.

Management faces major problems with respect to the amount of time, resources and information-gathering methods used to make decisions which should also be compatible with the prime business systems (Lech 2012:967). Lech (2012:968) expands on it, by noting that this activity poses certain challenges when it comes to decision making. The problem occurs when managers are required to make a decision concerning the total time that ought to be spent to gather enough information to make good decisions. Furthermore, questions emerge around how businesses should manage the information-gathering task to obtain maximum information accuracy.

Proctor (2014:61) describes a problem as any situation that is perceived to exist between what is and what should be and problem-solving involves the processing of gathered information. Combe (2014:243) explains that managers with good problem-solving competencies may generate excellent competitive advantages for the business. Problems occur within a business when the outcome does not meet the identified business goals (Daft,

Kendrick & Vershinina 2010:323). Therefore problem-solving is the skill applied when action is taken to achieve identified business goals and objectives (Daft & Marcic 2014:15).

Weaknesses will always exist within manufacturing businesses, created by factors such as irrelevant information, time delay, changes in the environment and manager incompetency, which all add to the problems management is accountable for (Lech 2012:968). Problem-solving for managers is less time consuming and more effective when they have the necessary expertise and experience regarding that specific problem.

Managers are required to delegate tasks effectively in order to enable delegates to join in on problem-solving. In doing so, managers gain knowledge concerning all the business processes and improve their managerial competencies (Griffen & Van Fleet 2014:58). Managerial success profoundly rests upon good decision-making particularly concerning business structures, methods, and the availability of information (De Janasz, Dowd & Schneider 2012:306). A study by Jones and Hood (2010:387) shows that problem-solving is more effective and less time-consuming when the managers have knowledge of the subject or have access to relevant information. Wu and Pagell (2010:578) state that the complexity with problem-solving comes with uncertainty and lack of information.

4.3 Planning and organising competencies

The management process includes planning, organising, leading and controlling resources, which enable management to achieve the set goals of the organisation (Alsemgeest, Booyesen, Bosch, Boshoff, Botha, Cunningham, Henrico, Musengi-Ajulu & Visser 2017:25;123). Given the importance of planning and organising in the management process, Hellriegel *et al.* (2012:35) explain that it is essential for managers to collaborate with employees to clarify broad objectives, discuss resource allocation and establish completion dates as contributors to planning and organising competencies. Planning is defined by Alsemgeest *et al* (2017:25) as the starting point of the management process as well as the setting up a series of steps to achieve a specific goal.

Furthermore planning, according to Schermerhorn (2013:195), involves taking into account the overall business activities including long-term and short-term goals and compiling a framework for completion. Organising on the other hand involves the stage where management group their resources in such a way that they met the business objectives

(Alsemgeest *et al* 2017:25). The effectiveness of planning and organising depends on whether the goals and objectives at the top level of the business support the goals and objectives at the middle and bottom level of the business. In essence, planning and organising work best when the business as a whole aims at achieving the same set of goals and have corresponding action plans (Williams 2014:113).

The main purpose of middle-level managers is to establish short-term plans, execute the plans within the specific framework and establish rules to ultimately achieve long-term plans made by top managers (Nieuwenhuizen & Rossouw 2012:45). Management avoids complications or design methods that remove challenges through effective planning and organising (Whetten & Cameron 2011:122). Long-term success therefore depends on managers' ability to be prepared, build resilience, plan and organise business activities.

Hazir (2015:812) highlights one of the most important aspects for managers in manufacturing businesses, namely project management. This includes monitoring how successful tasks are completed. Understanding planning and scheduling is a necessity for any manufacturing manager to achieve the specific goals and objectives of an undertaken project (Williams 2014:299).

The most common challenge faced by managers with regard to project management is the effective development of schedules that can tolerate uncertainties (Hazir 2015:812). Inability of managers to schedule projects effectively results in poor performance (Whetten & Cameron 2011:328). Scheduling in businesses depends heavily on simulation to establish the work load and distribute priorities. A wide variety of computer programs are available for running this simulation and generally one schedule cannot work for all departments. Each department needs its own schedule to eliminate problems for the business and for the customer (Kamauff 2010:2). In essence, scheduling supports effective time management to complete specific projects.

4.4 Time management

The dynamic business environment presents various challenges and in an attempt to succeed managers often seek appropriate time management tactics to ensure their work is done on time (Passerini 2013:333). Efficient time management comprises an individual's ability to arrange tasks and activities in accordance with importance and urgency (Griffen &

Van Fleet 2014:10, 57). Lazenby (2015:108) explains time management as the skill which allows managers to do more in less time with better achievement of goals and objectives.

Time management is further essential to control work tasks, sustain equilibrium among work and personal life and decrease stress levels. While time management presents several benefits, interruptions occur which influence the efficiency of time management (Passerini 2013:333). Interruptions include any obstruction which adversely influences efficient time management such as continuous telephone calls, unscheduled visitors and meetings. Daft and Marcic (2014:126-127) describe four techniques that enable productive performance using effective time management skills.

Firstly, the use of alphabet letters to arrange tasks and activities from most important to less important. The second technique refers to Pareto time-management which is referred to as the 80/20 rule. This rule specifies that 20 percent of tasks and activities results in 80 percent of the work time (Lazenby 2015:109). A third technique embraces taking 10 minutes at the end of each day for work review purposes as well as for planning a to-do-list for the next day. Lastly, individuals should do only one task at a time so that all attention is focused on one task to improve the results.

De Janasz *et al.* (2012:82) explain that these techniques are not applied every minute of the working day. It suggests allocating adequate time to complete tasks and plan successfully to allow time for unforeseen situations that are unavoidable. De Janasz *et al.* (2012:82) further describe managers' time management as the ability to distribute their time and resources effectively in order to achieve their goals. It is thus a management skill that refers to how one spends one's time which allows for prioritisation in order to achieve more objectives in one's business and personal life. Jones and Hood (2010:386) emphasise that correct and effective time management ultimately increases productivity.

4.5 Budgeting and financial management

Financial management has long been recognised as an important management tool (Liu 2014:171). Financial management can be described as the process of establishing value in a business and thus being capable of making the correct decisions (Bowdin *et al.* 2011:301). For managers to make effective financial decisions it is essential for them to consider costs

and profit by seeking maximum return on equity and to understand the factors that influence the financial position of businesses.

Implementing financial management gives managers a complete overview of the current and future state of the financial position (Elhanna 2015:977; Wibowo & Alfen 2013:407). Financial management includes cost control in order to achieve profit and adding value to products and services (Thompson & Martin 2010:133). Furthermore, financial control can be maintained by using budgets. In essence, budgeting requires the authorisation and delegation of budget activities between individual managers and other employees (Mullins 2013:640).

Budget targets can be understood as financial plans and calculated estimates of expected future outcomes agreed on by the management team (Combe, 2015:204). Budget targets determine managements' estimated revenue and expenditure which links to sufficient resources purchased and consumed and also indicate how much will be expected in sales (Zayed & Liu 2014:171).

Kamauff (2010:22) adamantly professes that, management in manufacturing businesses should be able to productively identify alternative solutions to work. They need to be able to identify what the financial potential, costs to produce and the return on investment of the products that the business offers would be. Kihn (2011:241) states that business activities and goals revolve around the budget targets; therefore it is managers' responsibility to ensure the employees of the business commit to given budgets. It is consequently important for the budget targets to be communicated to employees in the business so that all employees know what is expected of them (Kihn 2011:217).

5. RESEARCH METHODOLOGY

5.1 Research design, target population and sampling

A quantitative descriptive research design was implemented in this research to investigate the planning and administration competencies of top and middle-level managers in the manufacturing industry. Burns and Bush (2014:102) explains the purpose of descriptive research as being to find answers to questions such as where, when, who, what and how. Descriptive research is also used to present findings of a large sample to predict variables

(Burns & Bush 2014:102). Berndt and Petzer (2013:47) explain that this method is best used to measure the relation between constructs in terms of explaining and predicting influencing factors.

The target population included middle and top-level managers of a wide range of manufacturing businesses in four provinces of South Africa, namely Gauteng, North West, Free State and Western Cape. Respondents were approached based on a non-probability convenience sampling technique (Berndt & Petzer 2013:174); therefore excluding the possibility of generalisation. Consequently, due to budgetary restrictions, the sample was drawn from a section of the population that was easily reachable for the fieldworkers.

Table 1 discloses that a total of 343 (n = 343) usable questionnaires were returned by 236 (68.80%) males and 107 (31.20%) females from the four provinces. According to Tabachnick and Fidell (2007:613), the rule of thumb is that it is comforting to have at least 300 respondents for a factor analyses.

TABLE 1: Sampling representing the target population

Province	Businesses	Questionnaires
Gauteng	35	179
North-West	18	82
Free State	8	30
Western Cape	6	52
Total	67	343

Source: Calculated from survey results

5.2 Research instrument and pretesting of the questionnaire

Data was collected by means of a self-administered and structured questionnaire compiled by the authors. The advantage of this method was that it allowed the respondents to fill out the questionnaire in their own time with no assistance required from the researcher (Cooper & Schindler 2014:225).

The first section (Section A) of the questionnaire measured respondents' demographic profile. The second section (Section B) measured the planning and administration competencies, namely respondents' information-gathering and problem-solving, planning and organising, time management, as well as budgeting and financial management. Each of the items included in the scales was measured on a five-point Likert-type scale, with 1 - representing 'poor', 2 - 'fair', 3 - 'good', 4 - 'very good' and 5 - 'superior'.

The questionnaire was developed by ensuring that the questions were aligned with the objectives of this study. A pilot study was done in which 30 respondents, who did not form part of the sample for the final study, participated in the questionnaire pretesting with the purpose of identifying possible problems such as wording or difficulty among respondents to complete the questionnaire (Burns & Bush 2014:229). After various slight adjustments had been made, the questionnaire was finalised and distributed by trained fieldworkers.

5.3 Data collection procedure

Trained fieldworkers were used to distribute the questionnaires to the given target population. They ensured that the target population met the identified criteria. They also attended to problems encountered by respondents while completing the questionnaire and collected the questionnaires once completed. The fieldworkers were twelve Honours BCom students studying at the North-West University, Potchefstroom Campus School of Business Management. They gained experience in research in their pre- as well as postgraduate years.

5.4 Data analysis

Data from the questionnaire was explored using the Statistical Package for the Social Science (SPSS) version 22 to capture, clean, edit and analyse the data obtained. The demographic profile of respondents (Section A of the questionnaire) was investigated using descriptive statistics, including frequencies and percentages. Results of the items in the four main constructs (Section B of the questionnaire) were calculated using means (\bar{x}) and standard deviations (SD).

The following analyses were executed:

- Construct validity was tested by using a Confirmatory Factor Analysis (CFA), followed by an examination of the content validity.
- Cronbach alpha coefficients were computed to determine the reliability of the questionnaire.
- Frequency analyses, mean scores and standard deviations were computed for all the items in the questionnaire (see Tables 3 to 6).
- The Pearson's Product Moment Correlation test (Pallant 2010:122) was used to test the formulated hypotheses (see Tables 7 and 8).

5.5 Psychometric properties of the measuring instrument

The psychometric properties of the measuring instrument were examined by assessing construct and content validity while reliability was examined by computing Cronbach alpha coefficients for the four variables.

5.5.1 Construct validity

Construct validity is used to establish whether the measuring scales effectively measure what the researcher intended it to measure (Iacobucci & Churchill 2010:257). The content was developed by studying researched theory and articles (Dogra 2012; Kalliath & Kalliath 2012; Kamauff 2010) and the constructs were developed accordingly. A CFA was conducted on each of the four dimensions of managers' planning and administration competencies, using a principal component analysis with direct oblimin rotation.

With regard to the first construct 'managers' information-gathering and problem-solving skills' a Measuring Sample Adequacy (MSA) (Kaiser-Meyer-Olkin measure of sampling adequacy) of 0.740 was obtained, which was well above the acceptable limit, namely 0.50 (Field 2013:695). The results of the CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 61.43% of the variance, with communalities on the various items varying from 0.408 to 0.575. With regard to the second construct 'managers' planning and organising skills' an MSA of 0.769 was obtained.

The CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 65.67% of the variance, with communalities on the various items varying from 0.438 to 0.584. The third construct 'managers' time management skills' obtained an

MSA of 0.781. The CFA confirmed that the five items measuring the construct could be reduced to one factor, explaining 50.10% of the variance, with communalities on the items varying from 0.390 to 0.585.

For the last construct 'managers' budgeting and financial management' an MSA of 0.833 was obtained. The CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 66.74% of the variance, with communalities varying from 0.598 to 0.763.

All of the MSA scores were well above the required 0.50 (Field, 2013:695) and the measuring instrument could be considered construct valid due to sufficient explanations of the variances and high communalities on the items.

5.5.2 Content validity

Zikmund and Babin (2013:258) explain that content validity is used to measure whether the content ties into the proposed concept's description. For item development purposes researched theories, articles and books mainly focusing on the planning and administration competencies of managers were used.

An in-depth analysis and evaluation was carried out to ensure that the items in all four scales of the questionnaire were a valid representation of the specific constructs being tested. Five experts within the field of business management were requested to evaluate the items that measured the constructs and found that all the items fell within the boundaries of the content domain and that the items in each sub-scale represented the concept sufficiently. Consequently, the instrument was deemed content valid.

5.5.3 Reliability

Pallant (2010:7) refers to reliability as the resemblance of results obtained by independent but comparable measures of the same object, attribute, or construct. In other words, the reliability of an instrument is an indication of the extent to which the measuring instrument can be used consistently and can be assessed by computing Cronbach alpha coefficients. An instrument can be considered reliable if the same variable in the same test conditions with the same instrument at repeated measurements yields the same result (Joubert, Hartell

& Lombard 2016:288). Reliability testing was subsequently undertaken using Cronbach alpha coefficient to determine whether the four constructs were indeed reliable (Pallant 2010:97).

Table 2 below indicates the reliability of the constructs according to Cronbach alpha coefficient values.

TABLE 2: Cronbach alpha coefficient values for the factors

Construct	Number of items	Cronbach alpha coefficient
Information-gathering and problem-solving	5	0.70
Planning and organising	5	0.74
Time management	5	0.75
Budgeting and financial management	5	0.87

Source: Calculated from survey results

It is evident from Table 2 that the Cronbach alpha coefficients are equal to or greater than 0.70, which indicates a high level of reliability (Field 2013:679) for all four scales that measure the planning and administration competencies of managers, with the scale that measures budgeting and financial management being exceptionally reliable. The measuring instrument was therefore considered reliable.

6. RESULTS OF EMPIRICAL STUDY

The results are presented in accordance with the objectives. The first objective was to investigate the demographic information concerning the respondents.

6.1 Demographic profile of respondents

A clear male dominance (68.80%) was evident in this study. Regarding age, most of the respondents (41.2%) were between 40 and 49 years old, followed by 28% that were 30-39 years of age, and lastly 18.9% that were 50-59 years of age. Only 30.3% of the respondents

had completed matric, while 27.7% had a business degree or diploma. Furthermore, the majority of the respondents (63.8%) were appointed at the middle management level.

6.2 Results regarding the findings of the four constructs

Information-gathering and problem-solving, planning and organising, time management and budgeting and financial management are the four constructs under investigation. The mean scores and standard deviations for each item in the four constructs are presented in Tables 3 to 6, where 1 = poor performance and 5 = superior performance.

6.2.1 Managers' information-gathering and problem-solving skills

The second objective was to determine the managers' information-gathering and problem-solving skills as contributors to their planning and administration competency, and the findings are depicted in Table 3.

TABLE 3: Information-gathering and problem-solving skills

Information-gathering and problem-solving skills	N	\bar{x}	SD
I monitor information that is relevant to on-going projects and activities.	343	4.02	0.69
I obtain and use relevant information to identify symptoms and underlying problems.	343	4.01	0.74
I make decisions on time.	343	4.01	0.76
I am able to anticipate negative and positive consequences when taking risks.	343	3.93	0.76
I know when expert knowledge is needed and ask for it to solve problems	343	4.21	0.71
Average	343	4.04	0.73

Source: Calculated from survey results

Table 3 shows that the average mean score ($\bar{x} = 4.04$; SD = 0.73) with regard to respondents' information-gathering and problem-solving, indicating that top and middle-level

managers are of opinion that their planning and administration competencies are on a very good level. Information-gathering includes obtaining resources in order to gain the best value from existing information for a specific purpose. Information-gathering is essential when managers face important decision making within a business (Kuratko 2014:153).

The items 'I know when expert knowledge is needed and ask for it to solve problems' achieved the highest score ($\bar{x} = 4.21$; SD = 0.71) and 'I am able to anticipate negative and positive consequences when taking risks' achieved the lowest score ($\bar{x} = 3.93$; SD = 0.76). This signifies that managers are not scared to ask for expert knowledge with a view to solve problems. Although managers rated the statement that they can anticipate negative and positive consequences when taking risks, the lowest, it still reflects a positive score which means they have the ability to foresee the results when taking risks.

6.2.2 Managers' planning and organising skills

The third objective was to investigate managers' planning and organising skills as contributors to their planning and administration competency of which the results are presented in Table 4.

TABLE 4: Planning and organising skills

Planning and organising skills	N	\bar{x}	SD
I develop plans and schedules to achieve specific goals.	343	3.89	0.74
I prioritise tasks in order to stay focused on those that are most important.	343	4.03	0.76
I can organise people around specific tasks to help them work together toward a common objective.	343	4.03	0.78
I delegate responsibility for tasks to co-workers.	343	3.78	0.93
I anticipate possible problems and develop plans in order to deal with them	343	3.85	0.75
Average	343	3.92	0.96

Source: Calculated from survey results

Table 4 depicts an average mean score of $\bar{x} = 3.92$ and $SD = 0.96$ for planning and organising, indicating that the respondents are of opinion that their planning and organising skills vary from good to very good. Planning, according to Nieman and Bennett (2014:189), is essential for developing business goals and objectives, and defining how it can be achieved. Planning is therefore often seen as the first step in the management process since other management roles are subordinate to planning.

The mean scores for the questions varied between $\bar{x} = 3.78$ and $\bar{x} = 4.03$ which are moderately consistent. The items 'I prioritise tasks in order to stay focused on those that are most important' and 'I can organise people around specific tasks to help them work together toward a common objective' achieved the highest mean score of 4.03 and a standard deviation of respectively 0.76 and 0.78. This implies that managers prioritise tasks to attend to the more important ones and that managers can organise their people to work towards common objectives.

6.2.3 Managers' time management skills

The third objective was to identify managers' time management skills as contributors to their planning and administration competency and the findings are reflected in Table 5.

TABLE 5: Time management skills

Time management skills	N	\bar{x}	SD
I handle several issues and projects at the same time, but do not over commit	343	3.67	0.84
I monitor and keep to a schedule or negotiate changes in the schedule if needed	343	3.76	0.80
I work well under time pressure	343	4.05	0.85
I know when to permit interruptions and when to screen them out	343	3.65	0.89
I know when to renegotiate established deadlines in order to deliver satisfactory results	343	3.75	0.80
Average	343	3.78	0.84

Source: Calculated from survey results

Table 5 reflects an average mean score of $\bar{x} = 3.78$ and $SD = 0.84$ for the time management dimension, portraying that managers feel that their time management skills are good. Efficient time management comprises an individual's ability to arrange tasks and activities in accordance with importance and urgency (Griffen & Van Fleet 2014:1057). The item 'I know when to permit interruptions and when to screen them out' achieved the lowest mean score ($\bar{x} = 3.65$, $SD = 0.89$) but although the lowest scored it is still well above average which means that managers indeed know how to handle interruptions. The item with the highest mean score ($\bar{x} = 4.05$; $SD = 0.85$) was 'I work well under time pressure', indicating that this is a strong point in their time management skills.

6.2.4 *Managers' budgeting and financial management skills*

The fourth objective was to measure managers' budgeting and financial management skills as contributors to their planning and administration competency, and the results are portrayed in Table 6.

TABLE 6: Budgeting and financial management skills

Budgeting and financial management skills	n	\bar{x}	SD
I understand budgets, cash flow and financial reports.	343	3.86	0.94
I use budgets and financial reports to make decisions.	343	3.75	1.03
I ensure that accurate and complete financial records are kept.	343	3.69	0.10
I create budgetary guidelines for co-workers.	343	3.31	1.01
I work well within the budgetary guidelines given.	343	3.78	0.86
Average	343	3.68	0.97

Source: Calculated from survey results

Table 6 depicts an average mean score of $\bar{x} = 3.68$ and $SD = 0.97$ for the budgeting and financial management construct, indicating that managers are convinced that they have the ability to manage budgets and financial aspects. The mean scores for this construct varied between $\bar{x} = 3.31$ and $\bar{x} = 3.86$ on a five-point Likert scale.

The item 'I understand budgets, cash flows and financial reports' achieved the highest mean score of $\bar{x} = 3.86$, which implies that managers feel they understand financial aspects quite well. The item 'I create budgetary guidelines for co-workers' achieved the lowest mean score of $\bar{x} = 3.31$.

This may indicate that managers don't feel it is very important to provide their workers with budgetary guidelines. This is contradictory to the opinion of Kihn (2011:217) who states that it is important that the budget targets be communicated to employees in the business so that all employees know what is expected of them.

6.3 Hypotheses testing

For the testing of the hypotheses, a correlation analysis was conducted based on Pallant's criteria for significance (Pallant 2010:134-135). Pearson Product Moment correlation coefficients are reported in Table 8 and Table 9.

6.3.1 Hypothesis 1

A significant and positive relation exists between managers' Information-gathering and problem-solving as well as between planning and organising skills as contributors to the planning and administration competency.

Pearson product-moment correlation coefficients were used to investigate the relation between the two constructs, 'information-gathering' and 'problem-solving', and planning and organising competencies. The results are indicated in Table 7.

A small p-value ($p \leq 0.05$) indicates strong evidence against the null hypothesis, therefore the null hypothesis can be rejected), whereas a large p-value ($p > 0.05$) indicates a weak evidence against the null hypothesis; thus the null hypothesis cannot be rejected.

Thus if $p < 0.05$, the hypothesis (H1 or H2) cannot be rejected, if $p > 0.05$, the hypothesis (H1 or H2) can be rejected. It is evident from Table 8 that $p < 0.05$, which indicates a significant and positive relation between the two variables. There was a strong, positive correlation between the two variables, namely information-gathering and problem-solving, and planning and organising ($r = 0.567$, $p < 0.05$). Consequently Hypothesis 1 can be accepted.

TABLE 7: Pearson correlation coefficients

		Information-gathering and problem-solving	Planning and organising projects
Information-gathering and problem-solving	Pearson correlation	1	0.57**
	Sig. (2-tailed)		0.00
	n	343	343
Planning and organising	Pearson correlation	0.57**	1
	Sig. (2-tailed)	0.00	
	n	343	343

**Correlation is significant at the 0.01 level (2-tailed)

Source: Calculated from survey results

6.3.2 Hypothesis 2

A significant and positive relation exists between managers' time management on the one hand and budgeting and financial management skills on the other as contributors to planning and administration competency.

Pearson product-moment correlation coefficients were also used to determine whether a relation exists between the two constructs time management and budgeting and financial management. The results are reflected in Table 8.

Table 8 indicates that $p < 0.05$, which reflects a significant and positive relation between time management, and budgeting and financial management. The strength of the correlations between the two variables is medium, because $r = 0.49$. A medium, positive correlation found between time management, and budgeting and financial management ($r = 0.49$; $p < 0.05$). Thus hypothesis 2 can also be accepted.

TABLE 8: Pearson correlation coefficient

		Time management	Budgeting and financial management
Time management	Pearson correlation	1	0.49**
	Sig. (2-tailed)		0.00
	n	343	343
Budgeting and financial management	Pearson correlation	0.49**	1
	Sig. (2-tailed)	0.00	
	n	343	343

**Correlation is significant at the 0.01 level (2-tailed)

Source: Calculated from survey results

7. RECOMMENDATIONS

For managers to be competent in managing the business and therefor improve the success of the business in the ever changing environment the following practical recommendations based on the findings are provided:

- To succeed in adapting to the changing business environment, managers need to develop and display effective managerial competencies such as planning and administration, which include constructs such as information-gathering and problem-solving (Table 3), planning and organising (Table 4), time management (Table 5) and budgeting and financial management (Table 6).
- Managers need to keep up to date with all relevant information regarding trends, fluctuations, market aspects ext. to be able to make informed decisions in the business. This is especially important when managers need to take important decisions regarding the business. Managers also need to be able to use the relevant information to identify and solve applicable problems. Managers therefor mustn't be afraid to involve experts in to interpret certain information before making important decisions.

- Managers must use effective planning and management schedules to make sure that set objectives are reached. Managers need to be able to plan and organise teams and team leaders to complete projects to meet the specific objectives set. In order for managers to do effective planning and organising they should assign responsibility, transfer authority and establish accountability. They must therefore learn to trust the co-workers in such a way that they are not scared to delegate some tasks.
- Managers must attend time management courses because efficient time management embraces an individual's ability to arrange tasks and activities in accordance with importance and urgency. They must also learn the necessary skills to be able to work under pressure by applying effective time management in crisis situations.
- Managers must have the ability to know when to allow interruptions and when to screen them out. Managers are advised to have 'available' and 'unavailable' times, implying that certain times for interruptions should be allowed and when unavailable the managers should indicate that only urgent cases may be dealt with, thereby minimising the interruption time during important work.
- Respondents ranked budgeting and financial management as the lowest of these four competencies, yet managers indicated that they understand budgets, cash flow and financial reports. This finding is consistent with findings of another empirical study on management competencies regarding budgeting and financial management reported in the literature (Kihn 2011:231).
- It is also recommended that several aspects regarding budgeting and financial management should be incorporated in managers' skills development plans to enhance their planning and administration competencies. They can attend basic financial management courses to help them interpret some financial statements and make them more competent to imply financial information in some decisions.

8. LIMITATIONS

The results of this study are subjected to some limitations. The population was limited to top and middle level managers in manufacturing business. It is suggested that future research must investigate low level managers as well. Furthermore it is suggested that not only

manufacturing business must be included. Despite the random selection of managers in the manufacturing business the study was limited to convenience sampling and it is acknowledge that the results cannot be generalised. Only selected provinces were included in the population. It is therefore suggested that for future studies the sample must be extended to the whole South Africa.

9. CONCLUSION

Top and middle management level managers in this study revealed good to very good planning and administration competencies which embraced information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management skills. Findings of the hypotheses testing showed positive relations between some of the skills. It seems that in the manufacturing industry there need not be a great concern about managers' general planning and administration competencies but a few specific aspects can be attended to such as the fact that most managers are male and fall within the older age range.

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