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# Importance of External Environmental Labour-Related Risk Factors for Financial Investment Decision-Making

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## ABSTRACT

External environmental labour-related risk factors influence the relationship between management and the work force of an enterprise. It is therefore of prime importance to consider these labour-related risk factors in order to be able to take a comprehensive financial investment decision. The risk factors concerned come from the political, economic, social and technological environments. The views of the participating investment practitioners (who are active in the long-term insurance industry) regarding these aspects are analysed against the background of relevant literature. The responses with reference to these labour-related risks in manual and knowledge worker enterprises are presented simultaneously and significant similarities and differences are highlighted.

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## 1 INTRODUCTION

Financial investment decision-making requires a detailed investigation of the external environmental labour-related risk factors, since these factors influence labour relations within enterprises. The external environmental labour-related risk factors to be considered include the political, economic, social and technological environments relevant to a particular enterprise. After taking relevant literature into consideration, the views of the participating investment practitioners (who are active in the long-term insurance industry) regarding these aspects are analysed. The responses in respect of labour-related risks in

manual and knowledge worker enterprises are presented simultaneously, and significant similarities and differences of opinion in this regard are examined.

## **2 OBJECTIVE OF THE RESEARCH**

The objective of this research is the improvement of financial investment decision-making by focusing on the external environmental labour-related risks of investment alternatives. To achieve this objective, cognisance of the relevant literature is essential, followed by an empirical survey that will provide the information needed to assess the importance of external environmental labour-related risks for financial investment decision-making. The conclusions should be valuable to institutional investors and to various persons employed in investment management.

## **3 THE EMPIRICAL STUDY METHOD**

Information from the Financial Services Board indicated that 52 long-term insurers were registered on 3 November 1998 (Van der Lith, 1998). Five of the long-term insurers were excluded from the survey due to the following reasons: These insurers

- (a) did not have any equities in their investment portfolios;
- (b) mainly invested in fixed property with only a negligible amount invested in unit trusts; or
- (c) had insignificant exposure to equities.

Although 47 long-term insurers participated in the survey, fewer interviews were required, because there were cases of the same institution handling the financial investment management of more than one long-term insurer. Consequently, 23 interviews were required to cover the financial investment decision-making practices of the 47 participating long-term insurers. A response rate of 100 per cent was therefore achieved.

The positions of the officials who were interviewed indicated that the majority of them had already achieved management status. The seniority of those people interviewed not only made a wealth of experience available for the purpose of the survey, but also enabled them to respond with confidence about the assessment of labour-related risks at their organisations. This contributed in more than one way to the reliability of the information which was obtained.

#### 4 EMPIRICAL RESULTS AGAINST THE BACKGROUND OF RELEVANT LITERATURE

The empirical results regarding the external environmental labour-related risk factors, with reference to the *overall* importance as well as the importance of the *detailed* risk factors, are discussed against the background of relevant literature.

##### 4.1 External Environmental Labour-Related Risk Factors

The *overall* importance of the external environmental labour-related risk factors appears in the following pivot table:

**Table 1** Responses regarding the *overall* importance of external environmental labour-related risk factors for the purpose of financial investment decision-making

Frequency	Importance of external environmental labour-related risk factors in cases where there are predominantly <i>knowledge workers</i> in the labour force				
	Not Important	Little Important	Moderately Important	Highly Important	Extremely Important
Importance of external environmental labour-related risk factors in cases where there are predominantly <i>manual</i> workers in the labour force					
Not important					
Little important					
Moderately important		3			
Highly important		2	10		
Extremely important		1	2	1	

The discussion guideline (applied during the interviews) made use of an ordinal scale ranging from "not important" (denoted by 1), "little important" (denoted by 2), "moderately important" (denoted by 3), "highly important" (denoted by 4) and "extremely important" (denoted by 5) to rate the external environmental labour-related risk factors in order of importance. The numbers on the ordinal scale were used to calculate the statistics in respect of all of these external environmental labour-related risk factors.

The mean (as a measure of central tendency) and the range (as a measure of dispersion) are valuable measures to describe the data. Differences in opinion

regarding manual and knowledge workers, however, are not adequately highlighted by these measures. In Table 1 it can be seen that four of the respondents indicated that external environmental labour-related risk factors are equally important for manual and knowledge worker enterprises (refer to the numbers in the shaded cells which is referred to as the diagonal line). The numbers above the diagonal line (zero in this case) represent those respondents who indicated that external environmental labour-related risk factors are more important for knowledge worker enterprises than for manual worker enterprises. In contrast, the observations below the diagonal line (19 in total) indicate that external environmental labour-related risk factors are more important for manual worker enterprises than for knowledge worker enterprises. This highlights the need for a statistical measure to indicate whether these differences in opinion regarding manual worker and knowledge worker enterprises are significant. The sign test (Sachs, 1984: 316-20) is used for this purpose.

The sign test is one of the simplest non-parametric tests and requires that the responses be ordinal-level at least, that is, that the responses can be ranked from low to high. The name "sign test" refers to the fact that only the signs of differences between observations are evaluated. The null hypothesis of the sign test is that the differences of paired observations on average are equal to zero; one expects about half of the differences to be less than zero (negative signs) and the other half to be greater than zero (positive signs). The sign test thus tests the null hypothesis that the distribution of the differences has median equal to zero. The null hypothesis is rejected if the number of differences of one sign is too large or too small, i.e. if this number falls short of or exceeds the respective confidence bounds which are summarised in a standardised table. The five per cent level was selected as the level of significance. Application of the sign test to the data summarised in the above table, where there are no observations above the diagonal line and four on it and 19 observations below the diagonal line, results in rejection of the null hypothesis at both the one per cent and five per cent level of significance. External environmental labour-related risk factors are therefore more important for the purpose of financial investment decision-making when enterprises employ manual workers instead of knowledge workers.

The views of the respondents regarding the importance of *detailed* external environmental labour-related risk factors (*viz.* the political, economic, social and technological environments) are summarised in Table 2 and subsequently commented on. The range of opinions will be reported, but only commented on if the difference in the range for manual and knowledge worker enterprises exceeds one.

**Table 2 Responses regarding the importance of detailed external environmental labour-related risk factors for the purpose of financial investment decision-making**

Labour-related risk factor	Manual workers	Knowledge workers	Sign test	
	Mean	Mean	Responses below/ on/ above the diagonal line	Differences in opinion are not significant ("NS") or significant ("S") with reference to the level of significance
<b>Political environment</b>	3.57	2.70	16/3/4	S (1%)
Political stability	3.74	3.00	15/3/5	S (5%)
Distribution of political power	3.13	2.39	16/4/3	S (1%)
Labour market policy	3.70	2.00	20/3/0	S (1%)
<b>Economic environment</b>	3.78	2.83	20/3/0	S (1%)
Business cycle	3.74	2.83	17/5/1	S (1%)
Level and trend in unemployment	3.65	2.26	18/4/1	S (1%)
Inflation	3.48	2.43	16/6/1	S (1%)
Global business environment	3.35	3.35	9/8/6	NS
<b>Social environment</b>	3.22	2.35	18/5/0	S (1%)
Different cultural values	3.48	1.65	22/1/0	S (1%)
Demographic characteristics and trends	3.13	1.83	18/5/0	S (1%)
Skills and education of the population	3.09	4.00	0/10/13	S (1%)
<b>Technological environment</b>	3.57	2.61	16/6/1	S (1%)
Impact of technological change on employment, production processes and the obsolescence of skills	3.83	2.57	19/3/1	S (1%)
Extent and manner of co-operation between management and the labour force when they deal with technological change	3.48	2.70	13/8/2	S (1%)

## 4.2 Political Environment

The respondents generally were of the opinion that the political environment was more important for manual than for knowledge worker enterprises. The mean of 3.57 (range of 3 with a minimum value of 2 and a maximum value of 5) in the case of manual worker enterprises and 2.70 (range of 3 with a minimum value of 1 and a maximum value of 4) for knowledge worker enterprises provide proof of this statement.

An investigation of the individual responses brings to light that only four of the respondents regarded the political environment as a more important risk factor for knowledge worker enterprises than for manual worker enterprises, while three of them regarded it as of equal importance. The majority of the respondents (16 of the 23) were of the opinion that the political environment was more important for manual than for knowledge worker enterprises. Application of the sign test shows, that the null hypothesis is rejected at the one per cent level of significance, which implies that the respondents regarded the political environment as a more important labour-related risk factor for manual than for knowledge worker enterprises.

The same political environment therefore has a significantly different impact on these two types of enterprises. The respondents were of the opinion that the political role players in South Africa had much work to do to reduce perceived labour-related risks attached to manual worker enterprises especially.

Consideration of the views of the respondents on the importance of the components of the political environment is valuable for clarifying which areas were of particular importance to them. It also enables political role players to identify key areas that require their attention to make South African enterprises more attractive to institutional investors. In what follows, the opinions of the respondents regarding the importance of the components of the political environment will be examined by focusing on political stability, the distribution of political power, and the labour market policy (Barker, 1999: 25; Blum, 1994: 13; Campbell, 1994: 188-9).

### 4.2.1 Political stability

Political stability was regarded as more important for manual than for knowledge worker enterprises. This is reflected by a mean of 3.74 (range of 3 with a minimum value of 2 and a maximum value of 5) for manual worker enterprises compared to a mean of 3.00 (range of 4 with a minimum value of 1 and a maximum value of 5) in the case of knowledge worker enterprises.

When the emphasis is shifted from the general view to the responses of the individual participants, it is interesting to note that five of the respondents were of the opinion that political stability was a more important risk factor for knowledge than for manual worker enterprises, three regarded it as of the same importance, while 15 emphasised that it was of more importance for manual worker enterprises. The null hypothesis is rejected at the five per cent level of significance and political stability should therefore be regarded as of greater importance for manual than for knowledge worker enterprises.

#### 4.2.2 *Distribution of political power*

The average respondent regarded the distribution of political power as more important for manual than for knowledge worker enterprises. This is reflected by a mean of 3.13 (range of 4 with a minimum value of 1 and a maximum value of 5) for the former type of enterprise and a mean of 2.39 (range of 4 with a minimum value of 1 and a maximum value of 5) for knowledge worker enterprises.

An analysis of the individual responses shows that only three of the respondents were of the opinion that the distribution of political power was a more important risk factor for knowledge worker enterprises than for manual worker enterprises, while 16 of the respondents held an opposing view. Four of the respondents indicated that the importance of this risk factor was the same for both types of enterprises. By the rejection of the null hypothesis, the sign test confirms that the difference in opinions regarding these two types of enterprises is significant at the one per cent level of significance, therefore the distribution of political power can be regarded as a more important labour-related risk factor for manual than for knowledge worker enterprises.

#### 4.2.3 *Labour market policy*

On average, the respondents were of the opinion that labour market policy was a far more important labour-related risk factor for manual than for knowledge worker enterprises. The mean of 3.70 (range of 3 with a minimum value of 2 and a maximum value of 5) in the case of manual worker enterprises and the mean of 2.00 (range of 2 with a minimum value of 1 and a maximum value of 3) when knowledge worker enterprises are the subject of assessment, is a reflection of this fact.

The general view on the importance of this component of the political environment also exists on the individual level, as confirmed by the sign test that indicates, by the rejection of the null hypothesis, that the difference in opinions in this regard is significant at the one per cent level. To be more specific, 20 of

the respondents were convinced that labour market policy was a more important labour-related risk for manual than for knowledge worker enterprises, with no views to the contrary, and only three respondents indicating that it was of the same importance for both types of enterprises. The conclusive evidence highlights the perceived role which labour market policy plays in increasing the risk profile of manual worker enterprises.

### 4.3 Economic Environment

The respondents generally were of the opinion that the economic environment was more important for manual than for knowledge worker enterprises. This is reflected by a mean of 3.78 (range of 3 with a minimum value of 2 and a maximum value of 5) for manual worker enterprises compared to a mean of 2.83 (range of 3 with a minimum value of 1 and a maximum value of 4) in the case of knowledge worker enterprises.

Closer analysis of the responses indicates that 20 of the respondents maintained that the economic environment was a more important labour-related risk factor for manual than for knowledge worker enterprises, three were of the opinion that it was of the same importance, while none of them regarded it as of more importance for knowledge worker enterprises. Application of the sign test indicates that these differences are significant at the one per cent level, therefore the conclusion can be reached that the economic environment is regarded as a more important labour-related risk factor for manual than for knowledge worker enterprises.

These results make it clear that the participating investors paid close attention to the economic environment when they considered financial investments in manual worker enterprises. Scrutiny of the responses in respect of the components of the economic environment is valuable for a better understanding of how the economic environment impacts on financial investment decision-making. Attention is therefore paid to the business cycle, the level and trend in unemployment, the impact of inflation, as well as the global business environment (Branchflower & Freeman, 1992: 57; Disney, Gosling & Machin, 1995: 404; Gandz, 1990: 74; Heenan, 1995: 18; Krugman, 1995: 330; Mason & Bain, 1993: 334; Wood, 1995: 57-58).

#### 4.3.1 Business cycle

The business cycle is generally regarded as more important for manual than for knowledge worker enterprises as reflected by a mean of 3.74 (range of 3 with a minimum value of 2 and a maximum value of 5) for the former type of



enterprise and a mean of 2.83 (range of 4 with a minimum value of 1 and a maximum value of 5) for the latter type of enterprise.

The higher importance of the business cycle as a labour-related risk factor for manual than for knowledge worker enterprises was supported by 17 respondents, with one response to the contrary and five who were of the opinion that this aspect was of equal importance for both types of enterprises. By rejecting the null hypothesis, the sign test indicates that these differences are significant at the one per cent level, therefore it can be concluded that the business cycle is a more important labour-related risk factor for manual than for knowledge worker enterprises.

#### 4.3.2 *Level and trend in unemployment*

The mean of 3.65 (range of 4 with a minimum value of 1 and a maximum value of 5) indicates that the level and trend in unemployment are perceived as approaching highly important for manual worker enterprises. In the case of knowledge worker enterprises, it is regarded as slightly more than of little importance, as highlighted by the mean of 2.26 (range of 4 with a minimum value of 1 and a maximum value of 5).

The importance of the level and trend in unemployment also becomes apparent when the opinions of the individual respondents are analysed. Eighteen of the respondents were convinced that it was a more important labour-related risk factor for manual than for knowledge worker enterprises, four were of the opinion that it was of similar importance, while only one felt that it was more important for knowledge worker enterprises. According to the sign test that rejected the null hypothesis, these differences are significant at the one per cent level, and it can therefore be concluded that the level and trend in unemployment is of greater importance for manual worker than for knowledge worker enterprises.

#### 4.3.3 *Inflation*

Inflation is another component of the economic environment that was regarded as more important for manual than for knowledge worker enterprises. The mean of 3.48 (range of 4 with a minimum value of 1 and a maximum value of 5) in the case of manual worker enterprises and 2.43 (range of 3 with a minimum value of 1 and a maximum value of 4) for knowledge worker enterprises provide proof of this statement.

This result is repeated on the individual level where 16 of the respondents mentioned that manual worker enterprises especially were exposed to this

labour-related risk factor compared to only one respondent who held an opposing view. Six of the respondents indicated that inflation was of similar importance for both types of enterprises. The sign test highlights that these differences are significant at the one per cent level by rejecting the null hypothesis, and therefore sufficient evidence exists to conclude that inflation is regarded as a more important labour-related risk for manual than for knowledge worker enterprises.

These results reflect the concern of the respondents when manual workers insist on wage increases beyond the rate of inflation without a matching growth in productivity. The risk in this regard can be substantial, especially if the labour force is in a strong bargaining position and the enterprise is characterised by a low profit margin.

#### 4.3.4 *Global business environment*

On average, the respondents were of the opinion that the global business environment as a labour-related risk factor was of the same importance for both manual and knowledge worker enterprises (mean of 3.35 and a range of 3 with a minimum value of 2 and a maximum value of 5 in both cases).

An analysis of the individual responses indicates that nine of the respondents were of the opinion that the global business environment was a more important labour-related risk factor for manual than for knowledge worker enterprises, while six respondents indicated that it was the other way round. Eight of the respondents mentioned that it was of equal importance for both types of enterprises. According to the sign test these differences are not significant, therefore the global business environment can be regarded as of equal importance for both manual and knowledge worker enterprises.

### 4.4 **Social Environment**

The social environment was regarded as more important for manual than for knowledge worker enterprises. This is reflected by a mean of 3.22 (range of 4 with a minimum value of 1 and a maximum value of 5) for manual worker enterprises compared to a mean of 2.35 (range of 3 with a minimum value of 1 and a maximum value of 4) in the case of knowledge worker enterprises.

The majority of the respondents were convinced that the social environment was a more important labour-related risk factor for manual than for knowledge worker enterprises. Eighteen of the respondents indicated that this was the case, while the remaining five mentioned that it was of the same importance for both types of enterprises. Application of the sign test confirms, by rejecting the null

hypothesis, that these differences are significant at the one per cent level of significance. It is therefore realistic to conclude that the social environment is more important for manual than for knowledge worker enterprises.

The perceived impact of the social environment, especially on manual worker enterprises, was highlighted in the preceding paragraphs. The respondents were of the opinion that the perceptions which manual workers brought to the workplace and the impact thereof on the employment relationship, was of particular importance when companies were assessed for the purpose of financial investment decision-making. It also indicated a concern among the respondents that the perceptions of manual workers, who were established in their subsocieties, might be in conflict with the values of their employers. The respondents were of the opinion that this was less of a problem in knowledge worker enterprises.

With the above-mentioned as background information, it is necessary to focus on the importance that respondents ascribe to the various components of the social environment as labour-related risk factors. The components are the different cultural values, the demographic characteristics and trends, as well as the skills and education of the population (Arumugam, 1996: 26; Barker, 1995: 34-6; Bendix, 1996: 19; Douwes Dekker, 1993: 15-16; Goldstein & Leopold, 1990: 87; Manrai & Manrai, 1995: 115; Minnaar, Pretorius & Wentzel, 1995:33; Mosca & Pressman, 1995: 163; Otting, 1993: 163; Sadie & Martins, 1994: 19; Sugeno, 1994: 519; Wooldridge, 1994: 383).

#### 4.4.1 *Different cultural values*

The respondents generally regarded different cultural values as much more important for manual than for knowledge worker enterprises. This is reflected by a mean of 3.48 in the case of manual worker enterprises, which is more than moderately important, compared to a mean of 1.65 for knowledge worker enterprises, which is short of being of little importance. The range of opinions in the case of manual worker enterprises (range of 4 with a minimum value of 1 and a maximum value of 5) exceeds the range of opinions regarding knowledge worker enterprises (range of 2 with a minimum value of 1 and a maximum value of 3), which indicates that the respondents showed a greater range of opinions with regard to the importance of this labour-related risk factor for manual than for knowledge worker enterprises.

An analysis of the responses obtained indicates that none of the respondents regarded this risk factor as of more importance for knowledge than for manual worker enterprises. Twenty-two of the respondents were convinced that it was of more importance for manual than for knowledge worker enterprises, whilst one

of the respondents regarded it as of equal importance for both types of enterprises. Application of the sign test indicates that these differences are significant at the one per cent level. Different cultural values are therefore perceived as of more importance for manual than for knowledge worker enterprises.

#### 4.4.2 *Demographic characteristics and trends*

The mean of 3.13 for manual worker enterprises and of 1.83 in the case of knowledge worker enterprises indicate that demographic characteristics and trends are generally perceived as more important for manual than for knowledge worker enterprises. The range of 4 (minimum value of 1 and maximum value of 5) in the case of manual worker enterprises and a range of 2 (minimum value of 1 and maximum value of 3) for knowledge worker enterprises highlight that there was less agreement among the respondents regarding this labour-related risk factor when manual workers are involved than in the case of enterprises employing mainly knowledge workers.

An analysis of the individual responses brings to light that 18 of the 23 respondents regarded this aspect as of more importance for manual than for knowledge worker enterprises. Not one of the respondents held a contrary view, while five respondents regarded demographic characteristics and trends as of equal importance for both types of enterprises. The sign test indicates that these differences are significant at the one per cent level by rejecting the null hypothesis. It can therefore be concluded that demographic characteristics and trends are perceived to be a more important labour-related risk factor for manual than for knowledge worker enterprises.

#### 4.4.3 *Skills and education of the population*

The mean of 4.00 (range of 4 with a minimum value of 1 and a maximum value of 5) indicates that the skills and education of the population are regarded as highly important for knowledge worker enterprises. The mean of 3.09 (range of 4 with a minimum value of 1 and a maximum value of 5) for manual worker enterprises shows that it is regarded as somewhat more than moderately important for these enterprises.

Thirteen of the respondents stated that this aspect was of more importance for knowledge than for manual worker enterprises, 10 were of the opinion that it was of equal importance, while none of the respondents regarded it as more important for manual than for knowledge worker enterprises. These differences are significant at the one per cent level, and rejecting the null hypothesis, the conclusion can therefore be reached that the skills and education of the

population are a more important labour-related risk factor for knowledge than for manual worker enterprises.

These results point to the concern among the respondents that the future supply of skilled workers might be inadequate to meet the demand for skills and education especially in knowledge worker enterprises. Shortages in this regard will tend to limit the growth potential of these enterprises and the increasing burden on those with skills might have a negative impact on their motivation and/or lead to excessive remuneration for them. This may tend to increase the risk profile of knowledge worker enterprises, unless they can rely on alternative external sources of skilled employees.

#### 4.5 Technological Environment

The mean of 3.57 (range of 3 with a minimum value of 2 and a maximum value of 5) is an indication that the technological environment is a more important labour-related risk factor for manual worker enterprises than for knowledge worker enterprises (a mean of 2.61 and a range of 4 with a minimum value of 1 and a maximum value of 5).

Sixteen of the respondents indicated that the technological environment was a more important labour-related risk factor for manual than for knowledge worker enterprises, while only one had an opposite view. Six respondents mentioned that it was of the same importance for both types of enterprises. The sign test indicates that these differences are significant at the one per cent level and the null hypothesis is rejected. The technological environment is therefore regarded as a more important labour-related risk factor for manual than for knowledge worker enterprises. Attention is paid to the importance of the components of the technological environment in the following paragraphs. The components are the impact of technological change on employment, production processes and the obsolescence of skills, as well as the extent and manner of co-operation between management and the labour force when they deal with technological change (Firoozi, 1994: 301; Freeman, Soete & Efendioglu, 1995: 587; Freund, 1992: 3; Machin & Van Reenen, 1998: 1217; Shostak, 1993: 33; Thomas, 1991: 167; Treynor, 1994: 6).

##### 4.5.1 *Impact of technological change on employment, production processes and the obsolescence of skills*

The respondents generally were of the opinion that this labour-related risk factor was more important for manual than for knowledge worker enterprises. This is highlighted by the mean of 3.83 (range of 4 with a minimum value of 1 and a maximum value of 5) for manual worker enterprises and the mean of 2.57 (range

of 4 with a minimum value of 1 and a maximum value of 5) in the case of knowledge worker enterprises.

The particular importance of this labour-related risk for manual worker enterprises was also obvious when the responses were analysed. Nineteen of the respondents were convinced that it was more important for manual than for knowledge worker enterprises, while only one had an opposing view, and three mentioned that it was of the same importance for both types of enterprises. Application of the sign test points to the significance of these differences by rejecting the null hypothesis and therefore should it be regarded as a more important labour-related risk factor for manual than for knowledge worker enterprises.

#### 4.5.2 *Extent and manner of co-operation between management and the labour force when they deal with technological change*

The extent and manner of co-operation between management and the labour force when they deal with technological change is more important for manual than for knowledge worker enterprises. This is reflected by the mean of 3.48 (range of 3 with a minimum value of 2 and a maximum value of 5) for manual worker enterprises and 2.70 (range of 4 with a minimum value of 1 and a maximum value of 5) in the case of knowledge worker enterprises.

The views of each of the respondents regarding the importance of this labour-related risk factor for the two types of enterprises also point to the significance of this aspect for manual worker enterprises in particular. Thirteen of the respondents maintained this view, eight respondents mentioned that it was equally important for both types of enterprises, while only two felt that it was a more important labour-related risk factor for knowledge than for manual worker enterprises. According to the sign test, these differences are significant at the one per cent level and the null hypothesis is rejected.

## 5 CONCLUSIONS

The overall importance of external environmental labour-related risk factors for the purpose of financial investment decision-making are regarded as of significantly more importance for manual than for knowledge worker enterprises.

The respondents are of the opinion that the following detailed external environmental labour-related risk factors are of more importance for manual

than for knowledge worker enterprises (with the approximate importance in brackets):

- Political environment (respectively highly and moderately important).
  - Political stability (respectively highly and moderately important).
  - Distribution of political power (respectively moderately and little important).
  - Labour market policy (respectively highly and little important).
- Economic environment (respectively highly and moderately important).
  - Business cycle (respectively highly and moderately important).
  - Level and trend in unemployment (respectively highly and little important).
  - Inflation (respectively moderately and little important).
- Social environment (respectively moderately and little important).
  - Different culture values (respectively moderately and little important).
  - Demographic characteristics and trends (respectively moderately and little important).
- Technological environment (respectively highly and moderately important).
  - Impact of technological change on employment, production processes and the obsolescence of skills (respectively highly and moderately important).
  - Extent and manner of co-operation between management and the labour force when they deal with technological change (respectively more than and less than moderately important).

The skills and education of the population, a component of the social environment, is the only external environmental labour-related risk factor regarded as of more importance for knowledge than for manual worker enterprises (respectively highly and moderately important). The global business environment, being a component of the economic environment, is the only external environmental labour-related risk factor that is regarded as of equal importance for manual and knowledge worker enterprises (both moderately important).

## 6 IMPLICATIONS

The conclusions of this study have implications for role players and should be considered to improve financial investment decision-making. The role players are, for example, institutional investors, enterprises listed on the JSE Securities Exchange South Africa, and others who are perceived to have an impact on labour-related risks in manual and knowledge worker enterprises.

## 6.1 Implications for Institutional Investors

Institutional investors should take the following into account with regard to the perceived *overall* importance of external environmental labour-related risk factors for *manual* worker enterprises in particular:

- Care should be taken not to blame manual workers for perceived labour-related risks when such risks actually originate in the external environment.
- The focus should not be on risks originating in the external environment only, but also on enterprise strategies for dealing with these risks. An example in this regard would be the co-operation of management and the labour force to deal with the impact of technological change.

The skills and education of the population, a component of the social environment, is the only external environmental labour-related risk factor that is regarded as of more importance for *knowledge* worker than for manual worker enterprises. When assessing this labour-related risk factor, institutional investors should not pay attention to education and skills development within South Africa only, but also to the mobility of knowledge workers in and out of South Africa. Strategies of companies to enhance the skills and education of the workforce internally, should also be given due attention by institutional investors.

## 6.2 Implications for Enterprises Listed on the JSE Securities Exchange South Africa

The conclusions of the study have important implications for management and employees of enterprises listed on the JSE Securities Exchange South Africa. *Overall*, external environmental labour-related risk factors, as well as the majority of the *detailed* external environmental labour-related risk factors, are perceived as more important in the case of *manual* worker enterprises than for knowledge worker enterprises. The implications for the management and employees of manual worker enterprises are therefore of particular interest.

As far as *management* is concerned, it is interesting to note the emphasis placed by the respondents on the importance of different cultural values, a component of the social environment, as a labour-related risk factor in the case of manual worker enterprises. This implies that the management in these enterprises should take cognisance of their responsibility to manage different cultures in the enterprise properly and to put it to productive use.

The conclusions of the study also have significant implications for the *employees* of manual worker enterprises. One such implication relates to the



conclusion that the respondents regard the economic environment as a more important labour-related risk factor for *manual* worker than for knowledge worker enterprises. This implies that the employees in manual worker enterprises should pay particular attention to the stance of the economic environment and refrain from irresponsible behaviour when negotiating with management.

### 6.3 Implications for Other Role Players

The conclusions of this study imply that *political role players* are perceived to have an important role to play in reducing labour-related risks in manual worker enterprises. It is important, furthermore, that political role players and *organised labour*, who both influence political decisions, bear in mind that government labour market policies are not evaluated in isolation by investment practitioners, but that they may refer to best practices identified in the rest of the world when they make their decisions. The study also has implications for *trade unions*, as social institutions, to assist at the national and enterprise level in promoting policies that will make it possible to cope with pressures resulting from different cultures in society and at the workplace.

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