
Noor Hassanah Husin 1,2*, Nur Naha Abu Mansur1, Beni Widarman Yus Kelana1
1Amman Hashim International Business School, Universiti Teknologi Malaysia, Jalan Sultan Yahya Petra, 54100, Kuala Lumpur, Malaysia
2Labuan Faculty of International Finance, Universiti Malaysia Sabah, Jalan Sungai Pagar, 87000 Labuan Federal Territory

ABSTRACT
This study identified the critical success factors of high-performance work systems (HPWS) in Malaysian manufacturing small and medium enterprises (SMEs). A pilot study was conducted on 30 SMEs from Malaysian manufacturing industries whereby a 55-item questionnaire captured the implementation level of HPWS practices in these industries. Descriptive analysis was performed to analyse the data using Statistical Package for the Social Sciences (SPSS) version 23 software. The findings showed that selective staffing was one of the most critical success factors of HPWS implementation in SME manufacturing industries. This study offers important guidelines for managers in Malaysian SMEs to implement HPWS and to improve SME performance. This research also provides new insight into the critical success factors of HPWS implementation as a tool to enhance employee productivity.

Keywords: high-performance work system (HPWS), small and medium enterprises (SMEs), manufacturing industry

1. Introduction
In Malaysia, SMEs account for more than one-third of the economy. In 2019, SMEs contributed RM552.3 billion to the economy with moderate GDP growth of 5.8% compared to 6.2% in 2018. Consequently, SMEs contribution increased to 38.9% from 38.3% in the previous year. Employment offering by SMEs also grew 3.0% in 2019, which accounted for the overall increase in employment to 48.4% from 48.0% in 2018. In 2019, SME exports showed a growth of 2.6% compared to 3.4% in 2018 due to relatively weak external demand. Of the total SME exports, 48% was contributed by the manufacturing sector (Department of Statistics Malaysia, 2020). Recently, under Budget 2019, RM210 million was reportedly allocated between 2019 and 2021 to support the transition and migration to Industry Revolution 4.0. The government has identified and nurtured specific economic sectors, especially within the SME community. With the increasingly demanding and challenging business world, SMEs need to compete with large and multinational firms to remain competitive in the industry.
Organisations are responsible for providing innovative opportunities to their employees by enriching their knowledge, skills, and abilities (Fu, Flood, Bosak, Morris, & O’Regan, 2015). They also need to supply ideas to help channel their workers’ creative abilities by converting ideas into profitable innovations (Prajogo and Ahmed, 2006; Aminah et al., 2021; Azlisham et al., 2021; Firkhan et al., 2021; Ishak et al., 2021). According to Agarwal (2014), “one option for organisations to become more innovative is to encourage their employees to be innovative”. In this regard, organisations must use a high-performance system that promotes good management, growth, and competitiveness of employees (Tsai, 2006; Norazmi et al., 2019; Norazmi, 2020; Zaid et al., 2020; Fauziyana et al., 2021; Zaid et al., 2021). One of the principles of human resource management (HRM) requires employees to come up with novel and creative ideas in work organisations (Ahmed, Ayub, and Klimoski, 2018; Rosnee et al., 2021; Roszi et al., 2021; Mohd Norazmi et al., 2021). Research on strategic human resource practices (SHRM) has suggested that high-performance work systems (HPWS) enable firms to become more effective and gain core competitive advantages (Zhang, Akhtar, Bal, Zhang, & Talat, 2018; Een et al., 2021) by allowing employees to express their ability to innovate, gain motivation and provide an opportunity for them to grow professionally.

Prior research viewed HPWS as the key contributing factor to generate innovative and performance-based outcomes at the organisational and individual level (Fu et al., 2015; Shahriari et al., 2017; Zhang et al., 2018; Saadiah et al., 2021). When employees are willing to share ideas, they also tend to develop new behaviour towards innovation (Escribá-Carda, Balbastre-Benavent, & Teresa Canet-Giner, 2017; Nik Nurhalida et al., 2021). Training, promotion, participation, reward, and safety at work are among the elements in HPWS that are part of HR practices that open a path for employees to learn new knowledge and develop innovative work behaviour among them. Therefore, HPWS is beneficial for SMEs in manufacturing industries to manage HRM systems and increase organisational performance, which includes human efficiency.

<table>
<thead>
<tr>
<th>Findings</th>
<th>Countries</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPWS enrich the talented, motivated, and committed staff through recruitment and selection</td>
<td>Pakistan</td>
<td>Waheed, Miao, Waheed, Ahmad, and Majeed (2019)</td>
</tr>
<tr>
<td>HPWS through task-related training enhance employee’s human capital, knowledge and ability</td>
<td>Conducted across 13 countries</td>
<td>Ma, Zhai, Zhong, and Zhang, (2019a)</td>
</tr>
<tr>
<td>HPWS through effective supervisory mentoring can fulfil basic psychological needs of employee satisfaction</td>
<td>Taiwan</td>
<td>Uen, Chang, McConville, and Tsai (2018)</td>
</tr>
<tr>
<td>HPWS can motivate employees to produce positive outcome, along with job security</td>
<td>Bangladesh</td>
<td>Akhtar and Pangil (2018)</td>
</tr>
<tr>
<td>HPWS through employee participation is the key component that determines the success of management strategies</td>
<td>Indonesia</td>
<td>Irawanto (2015)</td>
</tr>
<tr>
<td>HPWS as motivation-enhancing can increase the innovative behaviour of employees through</td>
<td>Spain</td>
<td>Prieto and Pérez-Santana (2014)</td>
</tr>
</tbody>
</table>
Hence, HPWS is one of the practices that can assist the SME manufacturing industries in enhancing the system and efficiency of human resource management to achieve the objectives of the company. Therefore, this study identified the critical success factors of HPWS among Malaysian SME manufacturing industries.

2. Literature Review

2.1 Selective staffing

By enriching talented, inspirational, dedicated, and creative workers; HRM practices help to promote innovation (Waheed et al., 2019). Such practices modify the recruitment and employee selection process that lead to innovation. Prieto and Pérez-Santana (2014) grouped selective staffing under ability-enhancing activities which are also linked to creative job behaviour. The positive effects of staffing further developed creative job behaviour in SMEs (Bücker and Horst, 2017). This outcome shows that strategic selection and recruitment by the management work together with talented employees to heighten performance and innovation.

2.2 Extensive training

Although training institutions offer many specialised courses in traditional management, training is required to instruct entrepreneurs to plan, educate and train themselves in economic innovation (Sarri, Bakouros, & Petridou, 2010). Nevertheless, a recent study that examined performance and innovation in SMEs stressed on the importance of business orientation and learning, the need for training, initiative-taking and the need for knowledgeable employees in SMEs (Bücker & Horst, 2017).

2.3 Mentoring

Mentoring schemes can assist with broader staff priorities, including the growth of leadership and succession planning (Dopson et al., 2017). A recent study by Uen et al. (2018) showed that mentoring roles have a positive effect on the creativity of employees. Therefore, employee innovation efficiency could be improved by task autonomy and the ability of the mentor to motivate.

2.4 Job security

Job security has empirically affected employee motivation in producing better performance results (Aktar & Pangil, 2018; Chirumbolo & Areni, 2005). This is because; employees tend to relate job security to downsizing strategies (Marques, Galende, Cruz, & Ferreira, 2014) and job insecurity. Job insecurity refers to a situation whereby creative behaviour is dramatically influenced by the level of commitment because it ignites disturbing feelings of work insecurity amongst employees. Hence, it is important to understand how employees perceive job security and how to ensure their commitment remains at the optimum level.

2.5 Employee participation

Participation works in three key components, where the first includes the opportunity to set their goals and career growth, the second component is to get ideas, while the third is to approve and assign responsibilities (Irawanto, 2015). All these components are the key to motivation that leads to greater dedication to their task and satisfaction. In line with Prieto and Pérez-Santana (2014), the
level of engagement also increased when employees are involved in organisational activities which in turn help them to perceive management support and opportunities for collaboration, thus igniting innovative behaviour to perform.

### 2.6 Performance appraisal

When the management implements a systematic and structured performance appraisal system, employees are clear about their job objectives, receive good feedback, accept associability, and develop a good relationship with top managers and co-workers; which can enable them to collaborate and support each other in the workforce (Evans & Davis, 2005), thus increasing solidarity among colleagues (Prieto & Pérez-Santana, 2014). In a study conducted by Ahmed et al. (2018), performance appraisal was recorded as the most important work practice that sparked employee motivation towards innovation by offering employees fair compensation based on their performance.

### 2.7 Compensation

Compensation is one of the organisational job resources that determine an individual’s behaviour towards performance in their career (Bendickson, Gur, & Taylor, 2018b; Fu et al., 2018; Rasheed et al., 2017a; J. Zhang et al., 2018), among others. Besides, compensation intrinsically motivates employees and keeps them enthusiastic about their work, thus making them more engaged with the organisation (Che Ahmat, Arendt, & Russell, 2019; Hoque, Awang, Siddiqui, & Sabiu, 2018; Lara & Salas-Vallina, 2017; Resurreccion, 2012; Salmela-Aro & Upadyaya, 2018; Taufek, Zulkifle, & Sharif, 2016). Rasheed et al. (2017a) conducted a cross-sectional study among SMEs operating in Pakistan and found a significant relationship between compensation and HPWS practices related to innovation. The study proved that SMEs that had adopted HPWS practices were able to heighten innovation output.

### 3. Research Methodology

This study adopted the quantitative approach to identify the critical success factors of HPWS in Malaysian SME manufacturing industries. This study used descriptive analysis to analyse the data and calculate the statistical mean. The questionnaire captured demographic information that was designed to examine the implementation of HPWS among Malaysian SMEs in manufacturing industries. In this study, HPWS consisted of seven dimensions, namely: selective staffing, extensive training, mentoring, job security, employee participation, performance appraisal, and compensation.

### 4. Results and Discussion

#### 4.1 Validity

An expert was employed to assess the validity of the content by requesting feedback consisting of comments, clarity, and quality of each item. The final draft of the questionnaire was sent to the HPWS industrial experts to validate the questionnaire.

A pilot study was conducted to enhance the quality and the efficiency of the main research (Hazzi & Maldaon, 2015; Fuzi et al., 2017). In the pilot test, 30 questionnaires were coded and analyzed with IBM Statistical Package Social Science (SPSS) Statistics software version 22 and the reliability of the instrument was tested. In this study, 80 questionnaires were distributed to the respondents by using face-to-face and online approaches and 31 were returned. Out of the 31
returned questionnaires, only 30 were usable. This study targeted middle management employees who worked in SME manufacturing industries because they have a pivotal role in transforming strategic intentions into operational practices in the decision-making process. Apart from getting involved in HPWS, they interacted with the top managers and the frontline employees to instruct them of any changes expected.

4.2 Reliability

Based on Cronbach’s alpha, the range between 0.70 and 0.80 is considered good reliability, while the range between 0.80 and 0.90 is deemed very good reliability (Tang et al., 2014). From the results, all items indicated good reliability with Cronbach’s alpha value scoring above 0.70. Table 3 presents the pilot results of the reliability analysis for HPWS dimensions.

Table 3. Reliability analysis for HPWS dimensions

<table>
<thead>
<tr>
<th>HPWS Dimensions</th>
<th>No of items</th>
<th>Alpha (α) values</th>
<th>Item for deletion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective staffing</td>
<td>8</td>
<td>0.918</td>
<td>None</td>
</tr>
<tr>
<td>Extensive training</td>
<td>8</td>
<td>0.884</td>
<td>None</td>
</tr>
<tr>
<td>Mentoring</td>
<td>9</td>
<td>0.905</td>
<td>None</td>
</tr>
<tr>
<td>Job security</td>
<td>4</td>
<td>0.927</td>
<td>None</td>
</tr>
<tr>
<td>Employee participation</td>
<td>6</td>
<td>0.976</td>
<td>None</td>
</tr>
<tr>
<td>Performance appraisal</td>
<td>11</td>
<td>0.957</td>
<td>None</td>
</tr>
<tr>
<td>Compensation</td>
<td>9</td>
<td>0.972</td>
<td>None</td>
</tr>
</tbody>
</table>

Table 3 shows the results of the HPWS dimensions and the reliability analysis for selective staffing that displayed the Cronbach’s alpha value at 0.918. This value ranged from 0.80 and 0.90, indicating very good reliability of the eight items measured on selective staffing. Extensive training scored an alpha value of (0.884), while mentoring was (0.905), job security was (0.927), employee participation was (0.976), performance appraisal was (0.957), and compensation scored (0.972). The Cronbach’s alpha value for all HPWS dimensions ranged from 0.80 and 0.90, which indicated very good reliability. In conclusion, the reliability analysis of the pilot data indicated that all the dimensions scored alpha (α) values above 0.7 (0.884 – 0.976). Hence, the HPWS could be employed to collect the actual data among Malaysian SME manufacturing industries.

Table 4. Average rating for critical success factors of HPWS

<table>
<thead>
<tr>
<th>Factors</th>
<th>Average mean</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selective staffing</td>
<td>3.951</td>
<td>1</td>
</tr>
<tr>
<td>Extensive training</td>
<td>3.697</td>
<td>5</td>
</tr>
<tr>
<td>Mentoring</td>
<td>3.803</td>
<td>3</td>
</tr>
<tr>
<td>Job security</td>
<td>3.783</td>
<td>4</td>
</tr>
<tr>
<td>Employee participation</td>
<td>3.833</td>
<td>2</td>
</tr>
<tr>
<td>Performance appraisal</td>
<td>3.481</td>
<td>7</td>
</tr>
<tr>
<td>Compensation</td>
<td>3.520</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 4 shows the mean results for critical success factors of HPWS. The overall mean score for each factor was obtained to identify the level of HPWS implementation in Malaysian SME manufacturing industries. The two highest critical success factors of HPWS were selective staffing (3.951) and employee participation (3.833). These were followed by mentoring (3.803), job security (3.783), extensive training (3.697), compensation (3.520), and performance appraisal (3.481). From the results, selective staffing scored the highest mean value, thus emerging as the most crucial factor in HPWS among Malaysian SME manufacturing industries. This is consistent with Rauch and Hatak (2016) who stated that selection and hired employees should be carefully implemented in HR practices because it leads to SMEs selecting the most qualified employees with adequate training in task execution. Waheed, Miao, Waheed, Ahmad, and Majeed (2019) mentioned that good HPWS practices should include staff selection to initiate new ideas and products. Therefore, one of the most critical elements in HPWS is the selection of employees to ensure the best candidate for the SME to boost the efficiency of the company.

Employee participation is the second important critical success factor of HPWS. According to Irawanto (2015), employee participation is a key component that determines the success of new management strategies and employee satisfaction. This notion is supported by Ma, Zhai, Zhong, and Zhang (2019) who stated that employee participation increases business innovation in terms of the market performance of new products and the proportion of company sales for newly produced products. Hence, for SMEs to compete in the manufacturing industry, employee participation is crucial in HPWS implementation to catch up with new, cutting-edge technologies. The third highest critical success factor of HPWS is mentoring. Ben Salem and Lakhal (2018) clarified that the organisational mentoring programme is intended to help employees gain knowledge and boost their career growth, besides ensuring the continuity of business operations. Therefore, mentoring is an important factor for the successful implementation of HPWS in SMEs to ensure that each employee receives proper guidance from their respective mentors, apart from improving the quality of work that will further improve company performance.

On the other hand, the three lowest critical success factors of HPWS are job security, extensive training, and compensation. This is consistent with Aktar and Pangil (2018), who asserted that employees were highly motivated to produce positive outcomes linked with job security. Hence, job security added a significant dimension to HPWS because if there is a sense of job insecurity, employees tend to reduce their commitment to the organisation. Extensive training was also one of the HPWS critical success factors because according to Ma et al. (2019), proper and well-planned training can maximise employee capacity and expertise, thus further enhancing human capital, knowledge, and the ability to innovate. Another HPWS success factor refers to compensation, whereby good compensation systems demonstrated better organisational and individual efficiency (Bendickson, Gur, & Taylor, 2018). In a similar vein, Rasheed, Shahzad, Conroy, Nadeem, and Siddique (2017) found SMEs that adopted compensation in HPWS practices were able to increase production output. Compensation is essential in HPWS practices among SMEs in order to award employees who have devoted their resources, time, and loyalty to achieve organisational objectives.

Finally, the lowest critical success factor of HPWS is performance appraisal. Based on a previous study, performance appraisal is one of the highest work commitment practices that set off
employee motivation (Ahmed, Ayub, and Klimoski, 2018). Studies show that performance appraisal helps in increasing employee motivation at the workplace due to the strong relationship among the variables (Bücker and Horst, 2017).

Based on these findings, selective staffing is one of the critical success factors that play a key role in ensuring that SMEs select the most qualified employees who are adequately trained because such practices lead to a better fit for the employees within the organisation.

5. Conclusion

Based on the findings, the critical success factor to implement HPWS is selective staffing followed by employee participation among Malaysian SME manufacturing industries. The seven valid and reliable critical success factors of HPWS obtained from the reliability analysis were selective staffing, extensive training, mentoring, job security, employee participation, performance appraisal, and compensation.

The practical implications of this study are to provide guidelines for Malaysian SME manufacturing industries in the implementation of HPWS, besides ensuring a proper human resource management system. The research findings also offer new insight into the critical success factors of HPWS to improve the performance of Malaysian manufacturing industries.

- References


