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Positioning Knowledge Transfer within MNC Subsidiary through Episodes Development

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Abstract

With the increasing number of multinational corporations (MNCs), there has been an increased need to understand how parent companies manage the operations of their subsidiaries and transfer knowledge to them. Japanese companies have been pioneers in this field, employing methods such as the Toyota Production System (TPS) to impart Japanese manufacturing philosophy and maintain quality and control in overseas operations. The process of transferring Japanese manufacturing capabilities has gotten a lot of attention, but little is known about how the subsidiaries that are expected to use these procedures actually acquire and incorporate them into their operations. This article examines the transfer of manufacturing knowledge from the parent company to the subsidiary from their perspective. An in-depth qualitative investigation was thus undertaken in the subsidiary of a Japanese multinational, comprising three key manufacturing initiatives (or philosophies), namely 'TPS,' 'TPM,' and 'TS'. 52 in-depth interviews with project members, moderate-participant observations, and documentations were used to collect case data. This study increases our understanding of knowledge transfer by utilizing the methods used within the subsidiary, how the entire process is formed, and, most crucially, the use and development of episodes in snapshots in comprehending the process.

Keywords: Knowledge Transfer, MNC Subsidiary, In-depth Practice-based view, Episodes Development, Malaysia.

Introduction

Multinational corporations (MNCs) have expanded rapidly over the last four decades. Academics have recently focused on the topic of knowledge, specifically how MNCs manage their knowledge, and have been investigating economic stimulation elements as well as their presence and development (Gupta and Govindarajan, 2000).

In view of the rapid growth of MNCs, it is becoming increasingly important to understand how parent companies manage the operations of their subsidiaries and transfer expertise to them (Alias et al, 2008a). This is especially important for industrial firms that are developing globally. Japanese businesses, in particular, have spearheaded the development of methods such as Kaizen and components of the Toyota Production System (TPS) such as Kanban, which

can be useful tools for transferring Japanese manufacturing philosophy and maintaining quality and control in overseas subsidiaries (Alias et al, 2008b).

Knowledge transfer is described as "the process through which one unit (e.g., group, department, or division) is affected by the experience of another" (Argote and Ingram, 2000: pg 151). According to Argote and Ingram (2000), the transmission of organizational knowledge (i.e., routine or best practices) can be seen by changes in the recipient units' performance or knowledge. Knowledge transfer is becoming increasingly important, particularly in multinational businesses (MNCs). As a result, knowledge in these distributed organizations must be transferred from one individual, group, department, or geographic division to another in order for efficient management to occur (Alias, 2013).

MNCs frequently manage activities in multiple countries from their home country. The head office of a home office corporation or MNC is commonly referred to as the "parent," while enterprises based in other countries are referred to as "subsidiaries." The subsidiaries often provide considerable financial contributions to the MNCs, as well as making significant direct investments abroad and actively managing and integrating businesses in a number of other countries (Birkinshaw, 1996).

Given the fast expansion of MNCs, understanding how parent organizations transfer their expertise to and manage the operations of their subsidiaries is critical (Alias et al, 2008b). Production companies, particularly Japanese multinational enterprises with multiple industrial units abroad, are particularly interested in this. Japanese businesses, in particular, have been trailblazers in the development of methods such as Kaizen and Toyota Production System (TPS) components such as Kanban, which can be useful tools for transferring Japanese manufacturing philosophy and maintaining quality and control to overseas affiliates (Alias et al, 2008b).

The Japanese MNC provides a great platform for studying knowledge transfer. Academics have become increasingly interested in the importance of knowledge management in businesses, particularly in MNCs (e.g., Ghoshal and Bartlett, 1988; Kogut and Zander, 1995; Szulanski, 1996; Gupta and Govindarajan, 2000; Eisenhardt and Santos, 2002) where many projects involve different types of knowledge. This position provides potential for additional research into this subject, particularly with regard to subsidiaries with locations in other countries such as Malaysia (Alias et al, 2008a).

As a result, by focusing on projects within the subsidiary, this research takes the subsidiary's perspective to investigate how knowledge of manufacturing processes is passed from a parent firm to its subsidiaries. According to Blackler (1995) and Koskinen (2003), projects frequently involve employees from many organizational levels and cross-sectional flows within an organization's and its subsidiaries' structure. Nonaka and Takeuchi (1995), Alavi and Leidner (2001), and Bender and Fish (2000) believe that the bulk of knowledge is generated, conveyed, and transferred throughout projects. Consequently, the process of information transmission becomes more visible and understandable, and the research's validity is ensured (Alias et al, 2008b). To acquire a better understanding of the processes that occur within an MNC subsidiary, including the responsibilities that individuals play in the process of knowledge transfer, it is necessary to research knowledge transfer in a micro setting (Alias, 2013).

When it comes to knowledge transfer between MNCs and their subsidiaries, replication and adaptation are the two main strategies that are frequently used to fit in with the local context (Szulanski et al, 2002; Williams, 2002; Chini, 2005). The term "replication" refers to a situation in which information is replicated or reproduced from its original source. Adaptation of

knowledge, on the other hand, occurs when someone (the recipient) modifies the information.

In this regard, the micro-environment of an MNC subsidiary will provide the opportunity to gain a deeper understanding, which is consistent with the recommendations regarding the need to understand how local managers and operatives apply the information to their working practices from a practical standpoint (Alias et al, 2008a). The Japanese MNC is an appropriate context for a study of knowledge flow because, in recent years, there has been increased interest among researchers in the role of knowledge management in organizations, particularly multinational corporations (e.g., Szulanski, 1996; Szulanski, 2000; Gupta and Govindarajan, 2000; Eisenhardt and Santos, 2002; Birkinshaw, 1996; Oliver et al, 1998; Minbaeva and Michailova, 2004).

Making existing information useful to the organization, according to Kostova (1999), necessitates effective top-down and bottom-up communication. However, effective communication across the hierarchy can be difficult, making knowledge transfer particularly difficult (Davenport and Prusak, 1998; Schlegelmilch and Chini, 2003; Edwards et al, 2005). Knowledge transmission inside an organization will be increased if it allows open communication networks where information producers and information seekers can assess information and knowledge via faster and more efficient pathways (Alias et al, 2008a; Alias, 2008c). Furthermore, since the early beginnings of MNC programs, such as quality circles and the zero-defect program, the use of multiple levels of hierarchy and the flow of order in an organization has been observed (Bennett, 1986; Kenney and Florida, 1995).

It is even more important if the organizational structure is built to accommodate initiatives that require information flow from several directions and are demanded by the projects themselves. This relates to the issue of face-to-face interactions and meetings between organizational members versus knowledge explained in databases or manuals, routines and procedures, and routines and procedures, and routines and procedures, in which any other form of different communication flow in a related area is being investigated (Alias et al, 2008b; Alias et al, 2020).

These views, which have been expressed in numerous studies, are influencing the direction of research in this area and providing new perspectives on how different information flow processes operate and differ, as well as how they are involved in and take place (Alias et al, 2008b; Alias et al, 2020; Alias and Mat, 2022). The main motivation and logic for this study is to further our understanding of knowledge transfer by utilizing tactics utilized within the subsidiary, how the entire process is carried out, and, most importantly, the usage of episodes in snapshots in understanding the process involved. Therefore, the main objectives of this paper are:

- to understand the processes of how MNC parent companies transfer knowledge of manufacturing operations to their subsidiaries.
- to explore how the MNC subsidiaries replicate and adapt knowledge from parents' companies.
- to understand the process of episodes development in knowledge transfer.

Setting of The Research In Gambatte Corporation

The Gambatte* Corporation (* anonymously referred to in this paper as Gambatte) is one of the world's leading suppliers of cutting-edge automotive systems, components, and technology to all major manufacturers (Alias et al, 2008b; Alias et al, 2020). It operates in 32 countries and territories and employs over 112,000 people in all aspects of the automobile

industry. The Corporation's global consolidated revenues reached US $30.6 billion for the fiscal year that ended on March 31, 2007, thanks to sales, product development, design, and production, as well as collaboration with local automakers and suppliers to provide the best answers to local needs (Alias, 2013).
In order to maintain the company's management principles, which are focused on customer satisfaction through the provision of quality products and services, global growth through anticipating changes, environmental preservation and harmony with society, corporate vitality, and respect for individuality, each Gambatte associate (employee) must embody the Gambatte spirit of creativity in thought and steady in action, cooperation and pioneering, as well as trustworthiness (Alias, 2013; Alias et al, 2008b; Alias et al, 2020; Alias and Mat, 2022).
Gambatte (Malaysia), the research site chosen for this paper, has developed to become the nation's largest manufacturer of automotive components and a substantial supplier of automotive components to both national car projects and Japanese automobiles produced in Malaysia since its inception in 1980. It is a wholly owned subsidiary of Gambatte Corp (Alias et al, 2008b; Alias et al, 2020). Gambatte, a name synonymous with quality, selects and implements continuous improvement initiatives that have the most impact on the most critical company plans and goals. This is accomplished by maintaining a focus on high quality and productivity, optimizing product design, reducing waste, and diversifying manufacturing processes (Alias et al, 2008b; Alias et al, 2020).
Gambatte (M) has consistently taken proactive and innovative steps. It is one of the first companies in the Gambatte Group of Companies to acquire the prestigious ISO/TS 16949 accreditation from SIRIM and the "International Automotive Task Force (IATF)," an organization that represents automakers and suppliers worldwide. Furthermore, the company has achieved ISO 14001 Environmental Management System certification, indicating its commitment to and efforts in environmental preservation (Alias et al, 2008; Alias et al, 2020).
There are other projects underway at this factory, but three significant ones have been carefully chosen to match with the three primary manufacturing goals (philosophies), providing a deeper understanding of how they are conveyed.

First Case-Setting – Gambatte TPS (Toyota Production System)
Gambatte TPS has a lengthy history, dating back to 1973 at GJP (Gambatte Japan - Gambatte Group's headquarters). This resulted from a Kaizen Activity directed by Toyota Motor Corporation, which designed this TPS system, and thus the name - Toyota Production System (TPS), which has become a globally recognized established manufacturing standard, particularly in the automotive sector and in relation to lean production initiatives (Alias et al, 2008b; Alias et al, 2020). Since 1996, individual line improvement (kaizen) projects have been held. Individually in this context should not be interpreted as an individual person in and of itself, but rather as an effort carried out individually in various departments to which the members were allocated, resulting in a minor influence on the organization as a whole (Alias et al., 2008b).
In 2002, a company-wide TPS team (formerly known as the Kaizen Project Team) was formed. It brought all of the participants together to start the first upgrade in the Thermal System Plant's Condenser Line. The Japanese HQ manager who came to GMY to offer the first Kanban Simulation training required strict transfer supervision.
The Kaizen Project Team was renamed the TPS Project Team in 2003, with eight members directly directed by the MD. In 2004, the TPS Team was divided into two divisions: the

Improvement Team and Small Fabrication. The former is concerned with improving the line, whereas the latter is concerned with machinery or equipment. Finally, in 2005, the TPS project team was promoted to the level of department, and the TPS Department was founded as a company-wide activity (Alias et al, 2008b; Alias et al, 2020).
This TPS Department Project served as the researcher's principal empirical site, where she interviewed key persons and observed their connections formally at meetings as well as in casual interactions.

Second Case-Setting – Gambatte TPM (Total Productive Maintenance)
TPM stands for Total Productive Maintenance. The Gambatte TPM Project has a 40-year history extending back to GJP (Gambatte Japan - the Gambatte Group's headquarters). However, in Gambatte Malaysia (GMY), TPM is slightly different from that written in textbooks, as it is more towards a management type of activity or job, in terms of how to co-ordinate it to benchmark against worldwide activity, because TPM is viewed as an international sort of activity. TPM is concerned with machines, how they are kept or maintained in general, and focuses on how to improve machine maintenance in general, which includes investigating who handles the machines, what systems maintain the machines, and how to improve machine knowledge, which, of course, necessitates education and training (Alias et al, 2008b; Alias et al, 2020).
TPM in GMY entails the execution and coordination of all of these operations "as a system, and TPM in Gambatte is a unique activity in and of itself, it's not only like the normal TPM per se in the international market where there are pillars, elements, and so on, but the TPM that was brought to us from GJP to GMY is more on the Gambatte way of TPM." It is a very unusual activity since we are looking at a very specialized area, maintenance management, in TPM the Gambatte manner," stated Mr M, the GM (TPM co-ordinator) (Alias, 2013).

Third Case – Gambatte TS Project
TS16949 is a brand-new international standard developed exclusively for the automotive sector. As with TPS and TPM, the researcher was able to conduct extensive interviews with Mr N, the project's co-ordinator and GMY Quality Director. The TS team is comprised of middle management from each GMY department. They are comparable in the hierarchy's middle zone (Alias et al, 2008b; Alias et al, 2020).
TS16949 is a new system that supersedes the well-known ISO9000 and 9001 standards that have been in effect since 1994. Unlike the others, TS imposes additional requirements in addition to the ISO requirements that the Gambatte team members are already familiar with, and GMY has had to engage an external consultant to teach the team what the system expects and how to implement it (Alias et al, 2008b; Alias et al, 2020).

Methodology, Resolutions and Questions
While the subject of knowledge transfer in MNCs has received significant attention in the literature, there is still a lack of understanding regarding how subsidiaries incorporate knowledge about manufacturing procedures from their parent businesses, as demonstrated by the preceding review.
As a result, the goal of this research is to comprehend the techniques used by parent companies to convey knowledge of industrial operations to their subsidiaries. Another important topic is how subsidiaries reproduce and adapt knowledge from parents, as well as the settings in which replication or adaptation occurs.

• How do parent companies transmit manufacturing operations experience to their subsidiaries, and how does the knowledge diffuse inside the subsidiary?

The methodological approach employs a qualitative case study with three instances from three independent projects in a subsidiary of an MNC (GMY) involving three key manufacturing endeavors (philosophies).

This case study is an empirical research that examines a present phenomena in the context of real-world occurrences in which the distinctions between phenomenon and context are not always clear (Eisenhardt, 1989; Strauss and Corbin, 1998). When "the investigation has little control over events and when the focus is on a contemporary phenomenon within some real-life context and its generalisability is determined by the strength of the description of the context" (Yin, 1984, p23), this technique is advised.

When a phenomenon is large and complex, a full, in-depth investigation is necessary, and a phenomenon cannot be researched outside of the context in which it occurs, the case study technique might be useful (Yin, 1994). A case study typically combines a variety of qualitative data collection approaches, such as interviews, documentation, and observations, but it may also include quantitative data, such as surveys and time-series data (Crabtree and Miller, 1999).

The study collected data from three GMY examples using an inductive methodology and qualitative approaches: TPS, TPM, and TS. 52 individual interviews with project participants, moderate-participant observations, and supporting documentation were used to acquire the data.

Findings and Discussions on Episodes Development In Knowledge Transfer

The whole data collection consists of 52 60-90 minute interviews, nine meetings (formal and ad hoc), one open seminar, two staff training sessions, three factory tours, five lunches and informal gatherings, and project documentation. The data generation process was extensive, involving a series of e-mails and phone calls. The transcription of the interview and meeting materials was about 900 pages long. Pictures, documents, and photos were also collected during the data collection process. More crucially, the data is gathered through a series of episodes.

An episode is a remembrance of scenes and highlights from the knowledge transfer process that are captured as they happen based on what and how the knowledge is conveyed. Its actual length ranges from 15 minutes to one hour. These episodes are significant for understanding the knowledge transfer process because they highlight the uniqueness of each process and explain how the subsidiary gains knowledge and then implements manufacturing practices into its daily function.

Based on Boyatzis (1998), the material was analyzed using thematic analysis. Each interview was taped, and the transcripts were then analyzed using deductive coding (based on earlier research) in accordance with Crabtree and Miller's (1999) template organising approach, as well as Boyatzis' (1998) inductive coding (themes derived from interviews). The textual data derived from interview transcriptions was analyzed using broad themes and patterns found (Alias, 2013; Alias et al. 2020).

In qualitative research, data collection and analysis are intertwined. Following coding, codes with comparable properties were combined to establish categories, and the coded data sections were organized according to the data gathering methodologies utilized (Hall, 2006). Some codes have been assigned to many categories. The classified data was printed and physically placed in folders labelled with the categories. Each research topic was then

surrounded by the categories provided by each data collection approach (Alias et al, 2008c; Alias et al, 2020).

After the related patterns were merged to generate sub-themes, the themes and sub-themes that arose were collected together. The issue analysis was validated further by examining the literature and, on occasion, soliciting feedback from respondents, giving it significantly more substance. The saturation points for the constant-comparative approach used to analyze the qualitative data were reached, which was then validated by new discoveries. This strategy was necessary to find answers to the research questions (Alias et al, 2008c; Alias et al, 2020).

The connected patterns were then combined to generate sub-themes, and the resulting themes and sub-themes were grouped together. Further validation was acquired by examining the literature and, on occasion, asking the respondents for comments, resulting in a much more precise theme analysis. The qualitative data were further analyzed with a constant-comparative technique, and saturation points were acquired to confirm the new findings. This procedure was critical in answering the research questions (Alias et al, 2020; Alias and Mat, 2022)

More importantly, the use of the episodes approach in this study is advantageous since the technique provides a thorough grasp of the process of information transfer because respondents provide an account of what actually occurs during the process. The episodes are offered in recognition of the known importance of placing stories in organizational research, which has become recognized in leadership and management, as well as in the areas of medical, psychology, and education that would bring out the real-life situations into pictures and words (Polanyi, 1998; Broner et al, 2001; Jashapara, 2004; Davenport, 1998)

The episodic analysis aids in answering the research objective of identifying the 'circumstances' in knowledge transfer so that replication and adaptation can be distinguished by providing an overall picture of how manufacturing practices knowledge is transferred, highlighting the exact reality of the context. The categories are inductively constructed from data episodes gathered on the Gambatte site through the researcher's assessment of the three initiatives (Alias and Mat, 2022).

In this study, the episode layout is crucial because it reflects the places, circumstances, and occurrences where most information is generated, shared, and conveyed in real life. As a result, the information transfer process can be easily examined and understood, giving the presentation significant authenticity and uniqueness in how knowledge transfer occurs in a real situation. This is a distinct feature of this study.

An episode is a memory of events from the knowledge transfer process that were recorded as they occurred, depending on what and how the information is conveyed. Its true length spans from 15 minutes to an hour. These occurrences are critical for comprehending the knowledge transfer process because they highlight how distinct each process is and how the subsidiary obtains information prior to implementing manufacturing techniques into its everyday operations (Alias and Mat, 2022).

Each episode consists of a setting, debates, and a summary. The key scene of the episode provides details on the action. The discussion is then followed by a more thorough study of the data in an attempt to answer the research question, and the summary concludes the entire program. There are 16 carefully selected episodes, labeled as Plant 101, Plant 102, and Plant 103, that should cover every plant and manufacturing philosophy involved. As a result, it is prudent to show the episodes based on "the plant times across the lines" (ie; the production plant times (X) lines) of the production facilities across the three Japanese Manufacturing Initiatives philosophies (TPS, TPM, and TS); thus as a result of this

presentation, a more evenly distributed and holistic illustration of the full case can be produced throughout the entire episodes.

The episodes' presentation and descriptions are also written from the perspectives of the subjects (the persons involved). Additional interviews are paired with observations to reinforce and enrich data gathered through interviews, contributing to data dependability and validity. Table 4.1 shows the layout - the arrangement of the plants and lines:

Table 4.1:
Arrangement of Plants and Lines Throughout Episodes

Gambatte (M)		**Manufacturing Systems / Philosophies**		
Shopfloor	Production Lines	TPS	TPM	TS
Plant 101	Condenser	**Eps 2**		
	Evaporator		**Eps 8**	
	Piping	**Eps 3**		
	Compressor	**Eps 9**		**Eps 14**
	Learning Area	**Eps 10**		
	Office of Restoration		**Eps 16**	
Plant 102	Ventilator & Heater	**Eps 11**	**Eps 5**	
	Cooling Unit & Blower			**Eps 4**
	Radiator			**Eps 1**
	Learning Area	**Eps 12**		
	Office of Restoration		**Eps 15**	
Plant 103	ECU (Engine Control Unit)			**Eps 6**
	CDI Amplifier		**Eps 7**	
	AC Amplifier & Controller			**Eps 13**
Total number of episodes per philosophy		**Six**	**Five**	**Five**

The episodes are represented here, with the numbers indicating where they are positioned within the production lines according to Table 4.1. There are 16 selected episodes that cover all of the plants and manufacturing philosophies involved, which include:

Episode No 1: Gemba & Irregularities Treatment
Episode No 2: TPS Activity Panel
Episode No 3: Champ
Episode No 4: Super-Operator & Picturization
Episode No 5: Trainings – both theoretical & practical
Episode No 6: Charts with Various Pen Colors
Episode No 7: Daily Maintenance & Five Ss
Episode No 8: TPM Corner & "Why Why Analysis"
Episode No 9: System of Kanban Cards
Episode No 10: Simulation of a Production Line
Episode No 11: Gambatte Ownership Culture & TPS Design in Action
Episode No 12: Asean Jeshuken
Episode No 13: Complaints from Customer
Episode No 14: Production Line Process Control

Episode No 15: Machine Spare Parts Control
Episode No 16: Pre-emptive Maintenance

An episode is a recollection of knowledge transfer episodes that are captured as they occur based on what and how the knowledge is given. It could be provided in the form of 5 to 15-minute highlights from a film or documentary. Each episode lasts anywhere from 15 minutes to an hour. These instances are crucial for understanding the knowledge transfer process and demonstrating how the subsidiary acquires information and subsequently incorporates manufacturing practices into daily operations (Alias, 2013). Each episode displays additional characteristics of information transfer, such as the medium, mechanism, and roles of the participants (Alias, 2013; Alias and Mat, 2022).

The Scene serves as the episode's focal point, describing a "component of a process or an activity." It's similar to a 5 to 15-minute movie trailer, but the information is conveyed verbally rather than graphically. Each of the scenes' "real situations" is "telecast" to reveal the entire episode's substance (Alias, 2013). To ensure that the plot of each scene flows eloquently, the scene's sub-contents are combined with genuine actors, perspectives on events, and locations to create a clear comprehension and logical knowledge transfer scenario (Alias and Mat, 2022).

The body of knowledge transfer literature illustrates two fundamental strategies for information transfer: replication and adaptation. To summarize, when information is replicated or reproduced, the term replication refers to an identical version of the original source. Adaptation, on the other hand, refers to a situation in which specific adjustments to knowledge are made (Szulanski, 1996; von Hippel, 1994).

In this research, replication occurs when there is a demand for repetition, with the conveyed information exactly reflecting the original knowledge. When the parent company needs more paperwork and standardization, replication occurs. However, in the case of adaptation, knowledge is adjusted to fit the demand for comprehension, and explanations are required (Alias et al, 2020). While Williams (2002) stated that adaptation necessitates more understanding and replication necessitates a more discrete approach, this study adds to the body of literature by describing the dimensions, criteria, and categories of what and how these approaches actually function in practical settings.

The activities' findings are depicted in 16 episodes, where it can be observed that when the same lean manufacturing or TPS system is employed in the subsidiary, direct copying (replication) or making alterations (adaptation) is dependent on the subsidiary's preference. The same can be said of TS systems and TPM implementations. The discovery of episode activities provides another intriguing factor. The more systematic and structured the manufacturing techniques transferred from the parent, as in the TS project, the more replications are used; conversely, the more conceptual, robust, open, and flexible the manufacturing techniques transferred from the parent, as in the TPS project, the more innovations are used (Alias and Mat, 2022). More importantly, using episodes to delve into data and discover how knowledge is presented is an important step toward understanding the bigger picture.

Conclusion

This study has added to the existing knowledge transfer literature topic. Using an inductive qualitative case study and thematic analysis, this study explores the transfer of knowledge within an MNC subsidiary during project execution. The main contribution of this study to the

body of knowledge, specifically on knowledge transfer by directly evaluating the dimensions and aspects of knowledge transmission.

The findings of the study lay the groundwork for understanding the process of knowledge transfer in a project setting, particularly within an MNC subsidiary. With this understanding, the ramifications for practice are recognized, as are recommendations for future research. The findings of the study applied the utilization of episodes in snapshots in understanding the process and events of knowledge transfer.

In conclusion, this study shows that replication and adaptation occur in many ways depending on the circumstances. It also means that replication and adaptation may occur in a specific order, but must evolve through time. Furthermore, episodes are essential for understanding the entire process. Overall, these findings would be beneficial and provide contributions to both the knowledge transfer component and the knowledge management field as a whole. In the end, this study will definitely provide significant inspiration for understanding of knowledge transfer within MNC subsidiary contexts and how MNCs might use it for future improvements. These contributions will undoubtedly assist academics, the body of knowledge, and practitioners at large.

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