4-2008

Chapter XV: Success Factors for the Global Implementation of ERP / HRMS Software

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Recommended Citation

House, D., De Vreede, G.-J., Wolcott, P., & Dick, K. (2008). Success Factors for the Global Implementation of ERP/HRMS Software. In C. Ferran and R. Salim (Eds.), Enterprise Resource Planning for Global Economics: Managerial Issues and Challenges (pp. 289–307). Hersey, PA: IGI Global. https://doi.org/10.4018/978-1-59904-531-3.ch015

Chapter XV
Success Factors for the Global Implementation of ERP/HRMS Software

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ABSTRACT

This research observes a global implementation of enterprise resource planning (ERP)/human resources management system (HRMS) software at an international company. The software was implemented in 16 countries. Variables such as cultural differences, communication-distance, management support, trust, and resistance to change were evaluated in the literature review. These variables have an impact on implementation success during global HRMS implementation. Further analyses on specific success factors faced with global implementations were evaluated using semi-structured interviews. The authors prepared a questionnaire to further explore the data. Respondents rated questions related to management support the highest overall. An interesting find was that the semi-structured interview results indicated that the software chosen was not a perfect fit for the global community. The mean for questions related to global HRMS success was higher for respondents located in the United States than those located in other locations.

INTRODUCTION

As companies expand globally, the challenge of integrating all parts of the business increases significantly. Many companies employ enterprise resource planning (ERP) systems to meet these challenges. However, ERP systems are difficult to implement successfully, and global ERP systems have additional challenges that compound the difficulties. This chapter summarizes research conducted to identify factors that influenced the success of a global implementation of enterprise resource planning/human resources management system (ERP/HRMS) software.

ERP software consists of a number of different information modules. Human resources management systems are a group of the modules of ERP software that typically house employee information such as payroll, compensation, training, and benefits. A majority of the research regarding ERP software does not specifically mention HRMS. However, because HRMS is one of the modules of ERP, HRMS and ERP are closely related.

Companies realize the value in storing global data using ERP software. Personal and work-related information about employees must be available for reporting and decision making. Typically human resources (HR) is the driving force behind the transformation to a global system. "If HR managers make it a top priority to link their systems on a global basis it will automatically elevate their role in expansion. HR departments must transform their operations in order to deal with the new global landscape" (Rothwell & Prescott, 1999, p. 7). Having access to global employee data gives companies the ability to get information quickly about the company as a whole.

The purpose of the research described in this chapter was to develop a better understanding of the factors that influence the success of a global ERP implementation. These factors included management support, resistance to change, communication-distance, trust, and cultural differences. We studied these factors in a case study of a global ERP implementation in a software company. Semi-structured interviews were conducted with key implementation team personnel. An evaluation was performed on the interview data and questionnaires were distributed to the entire global implementation team.

Global Software Inc. (the name has been changed to protect the identity of the company) is a software company that provides customer care and billing solutions for communications companies all over the world. Global Software Inc. provides services to more than 1,900 client sites—reaching over 40 million households worldwide. The publicly traded company employs approximately 2,600 employees. Global Software Inc. has offices throughout the United States, Canada, Mexico, Argentina, Brazil, France, the United Kingdom, Spain, Germany, Italy, Belgium, Singapore, Japan, Malaysia, Australia, India, and China. In 2002, Global Software Inc. nearly doubled its size by acquiring a global company. As a result, Global Software Inc. quickly went from a predominantly U.S.-based company to one with offices in multiple locations worldwide. The acquisition forced Global Software Inc. to evaluate its current business processes.

The HR tool in place before (and during) the acquisition was primarily a payroll tool that did not meet global business needs. The company needed a system that would store global data efficiently and be able to format that data to make strategic decisions. The executive management of the company knew that the current HRMS had to be reevaluated from a global perspective. The executive management was the main driving force behind the core global data requirements.

Global Software Inc. implemented a global HRMS so that all employee data could be located in the same system and be available to HR to make organizational decisions/evaluations. The company had one year to implement the ERP/HRMS system, and due to this time constraint it was necessary to focus on the components of the software that were necessary to house and process

employee data—the primary requirement. Therefore, the global implementation consisted of the HRMS portion of the software. This included all HR functionality and processes such as payroll, employee self-service, benefits, compensation, and reporting. Additional software module implementations performed by Global Software Inc. are outside of the scope of this research. The literature research conducted includes ERP software as a whole. The Method section contains more detailed information about the project.

The next section discusses some of the key literature on global ERP implementation and the factors that influence success—cultural differences, communication-distance, resistance to change, management support, and trust. Subsequent sections discuss the research method and quantitative and qualitative results. Finally, we summarize key findings and identify limitations of the study and future research opportunities.

BACKGROUND

HRMS software is one of the modules within an ERP system. It is not surprising therefore that a substantial part of the literature on global HRMS implementations focuses on enterprise resource planning implementations as a whole. For the purpose of this research, ERP implementation research is considered to include HRMS implementations.

As companies increase business around the world and manage employees in many different global locations, they need to access organizational data not only to support strategic decision making, but also to have operational information about individual employees. Global systems assist in consolidating data, making the data consistent, accurate, more reliable, and faster to process (Loeb, Rai, Ramaprasad, & Sharma, 1998). When decisions need to be made, companies that have the ability to report on the entire employee population quickly and effectively are able to save both time and expense.

Global implementations face numerous challenges, including agreeing on common user requirements, introducing changes in business processes, coordinating applications development, coordinating software releases, and encouraging local users to support global systems (Laudon & Laudon, 2004). The subsequent implementation is further challenging as:

...global rollouts present unique issues with timing because dealing with multiple labor markets and economic conditions around the globe is much more challenging than planning around one labor market or one economy. (Wiechmann, Ryan, & Hemingway, 2003, p. 73)

A review of the literature reveals five key factors that appear to affect the global implementation of an HRMS: cultural differences, communication-distance, resistance to change, management support, and trust. Each is discussed below in detail.

Cultural Differences

It is important to keep culture in mind when implementing software globally. Cultural differences can cause noteworthy issues among global implementations. When several different cultures are working together in the same organization or on the same team, it is important to remain flexible and understanding of other cultures. Hofstede (1983) defines culture as "collective mental programming: it is that part of our conditioning that we share with other members of our nation, region, or group but not with members of other nations, regions, or groups" (p. 76). Mathis and Jackson (2000) state that "culture is composed of societal forces affecting the values, beliefs, and actions of a distinct group of people" (p. 116). "Our own culture conditions us, consciously and unconsciously, to the way things are done. In a thousand different situations every day, culture smoothes human performance—we know what is

expected of us and what we can expect from others" (Elashmawi & Harris, 1993, p. 14). Elashmawi and Harris (1993) go on to state that our cultural values are based on experiences from childhood and beyond. The values that each individual has differ not only from country to country, but also within countries.

Hofstede conducted extensive research on culture. His seminal work describes four dimensions to characterize differences among countries: individualism vs. collectivism, large or small power distance, strong or weak uncertainty avoidance, masculinity vs. femininity (Hofstede, 1983). He later identified a fifth dimension, low vs. high long-term orientation**.** Global organizations can potentially use these dimensions to research differences among locations to help identify and avoid potential conflict.

Culture can affect a global implementation project in many ways. Cultural differences among team members can lead to conflict, misunderstandings, and poor team performance. Cultural differences among user communities can lead to differences in adoption of software implementations. But culture can also be a factor in successful implementations (Scott & Vessey, 2002). Open and honest communication engages employees in the system and creates loyalty for the product. Ives and Jarvenpaa (1991) found key issues involving the cultural environment and global IT. For instance, mangers should be sensitized to cultural, religious, and political differences and seek to agree on solutions that are the most mutually acceptable. Understanding and managing cultural differences is vital for successful implementation.

Gross and Wingerup (1999) suggest a strong global culture should be in place. A global corporate culture means "global planning, leadership, and governance that encourage multinational and cross-cultural collaboration. It means fostering global competencies and mobility of employees and managers. It means equipping people with a global mindset, social skills, and business skills" (Gross & Wingerup, 1999, p. 26). When values are initially created, the organization founder can greatly influence these values. It is important not to devalue local cultures when this organizational culture is set. Hofstede found that even if an organizational founder is creating the culture, his or her national culture is typically reflected in the organizational culture and passed on internationally (Hofstede, 1985). It is important for the founder to ensure that values are in place for business reasons, not strictly because of his or her own beliefs.

Krumbholz, Galliers, Coulianos, and Maiden (2000) suggest that one way to prevent problems related to culture is to have the implementation team model business processes, the culture factors that influence these, and how these factors influence system solutions. Another suggestion for multi-cultural teams is to work on teambuilding activities. According to Fisher and Fisher (2001), teams that are separated by distance should participate in activities to get to know each other on a more personal level, keeping in mind that such activities should be appropriate for all cultures participating.

"Cultural and social changes should accompany and complement technological changes for sustained and effective organizational change" (Newell, Pan, Galliers, & Huang, 2001, p. 76). It is imperative that organizations evaluate and resolve any potential cultural issues before or during project implementations.

Communication-Distance

"Communication on a project involves the exchange of information, ideas and status between the core and extended project teams" (Purba & Shah, 2000, p. 9). When the team members are not in the same location or even the same country, communication can be difficult. Care must be taken to ensure that each team member feels that he or she is able to speak his or her mind.

Project teams must be able to communicate effectively when distributed around the world:

People in scattered locations must have reliable channels of communication and equal access to resources to avoid duplication of effort and redundant costs. Employees need to be able to collaborate with each other across great distances. And, to be competitive, companies need a technological infrastructure that helps them maximize productivity. (Solomon, 1998, p. 13)

Time zone differences can sometimes be an advantage. It may always be a workday at one of the locations.

Distance among team members may be beneficial for the team. According to Bagchi, Hart, and Peterson (2004):

ITs have provided a means for the complex, changing patterns of interdependence in individualistic societies to be managed. IT is commonly used to promote the strengths and overcome the limitations of these characteristics of individualistic societies. It does so by allowing people to work more independently from one another in the sense that they have the increased option to maintain greater physical distance and schedule their activities to meet the needs of the various groups to which they belong without concern for the location of others. (pp. 32-33)

As new technology emerges, employees may more easily collaborate globally.

However beneficial virtual collaboration may be, holding face-to-face meetings periodically may be necessary. Meeting face-to-face can cultivate trust among team members. Fisher and Fisher (2001) recommend periodic face-to-face meetings for milestones and items that are best addressed in person (such as training or social activities).

Language barriers can also cause miscommunications and misunderstandings during global implementations. If the shared language is a second language for some team members, they may need additional processing time for system setups and decisions. When different sites that do not speak the same language interact, communication can be very difficult (Sheu, Chae, & Yang, 2004).

Resistance to Change

According to a survey conducted to find challenges experienced during ERP implementations, "the main hurdle faced by all companies was resistance to change" (Gupta, 2000, p. 116). The implementation team must be considerate of the requirements and desires of global locations. Users must be involved throughout the entire lifecycle of the project. Zhang, Banerjee, Lee, & Zhang (2003) found that if users are involved early in the organization requirements gathering, resistance to the new system will be decreased. Early involvement in the project gives users a feeling of responsibility for the new system/processes.

Wellins and Rioux (2000) noted that differences between business practices and locations can cause resistance to change. Individual locations need to collaborate to evaluate acceptance of the new system and resolve any feelings of discontent with the changes. Additionally, communicating changes early on will help alleviate feelings of possessiveness.

Organizations must be careful when proposing changes so that the local staff understands the initiative. If the staff does not accept the changes, it can cause resistance. Keeping all global team members engaged is most important to prevent these issues from surfacing. Management support is a key factor in ensuring that the changes in current processes are accepted throughout the company. Management and executive management support are essential to preventing resistance to change. Additional information regarding management support is located in the next section.

Management Support

Management support for both the implementation efforts and the ongoing use of the system is important. Employees are willing to put more effort

into an implementation if it is communicated that the software will be used for an extended period of time (Ross, 1999). Zhang et al. (2003) suggest that top management support can help make the implementation successful by "(1) providing leadership and (2) providing the necessary resources" (p. 5).

He (2004) mentions that management support "is important throughout the entire project life cycle" (p. 155). This is critical for the acceptance of the new system by the project team and any other personnel involved early on. Ghosh (2002) stresses the importance of management support for ERP implementations. He specifically states that corporate-level management support is necessary to keep everyone motivated. Communication from corporate-level management throughout the project will get the employees excited (and prepared) for the change. Key milestones should be broadcast and celebrated.

Have a steering committee in place for quick issue resolution and monitoring the direction of the project. Typically, upper-level or executive management should participate on the committee. Having upper-level management make final decisions for key issues throughout the implementation will allow management to remain visible. Aladwani (2001) states that involving key leaders in the decision-making process throughout the implementation process will make those individuals feel more committed to the system. This commitment will flow down from the leaders to other coworkers. In global implementations, representatives from each location or region should be present. Careful selection of the steering committee members can ensure that communication between the regions remains intact. Team project leaders should also be allowed to participate to give them insight to decisions being made.

Trust

In ERP implementations, "trust increases the positive assessment of IT usefulness" (Gefen, Pavlou, Rose, & Warkentin, 2005, p. 55). Trust is an important variable for global implementations, because team members are from diverse cultural backgrounds and in distributed locations. According to Evaristo (2003), "higher levels of trust are supposed to result in more positive attitudes, superior levels of cooperation, and other forms of workplace behavior, as well as higher levels of performance" (p. 60). "Trust enables an environment where more cooperation, higher performance, and other attitudes and perceptions are more likely" (Evaristo, 2003, p. 60).

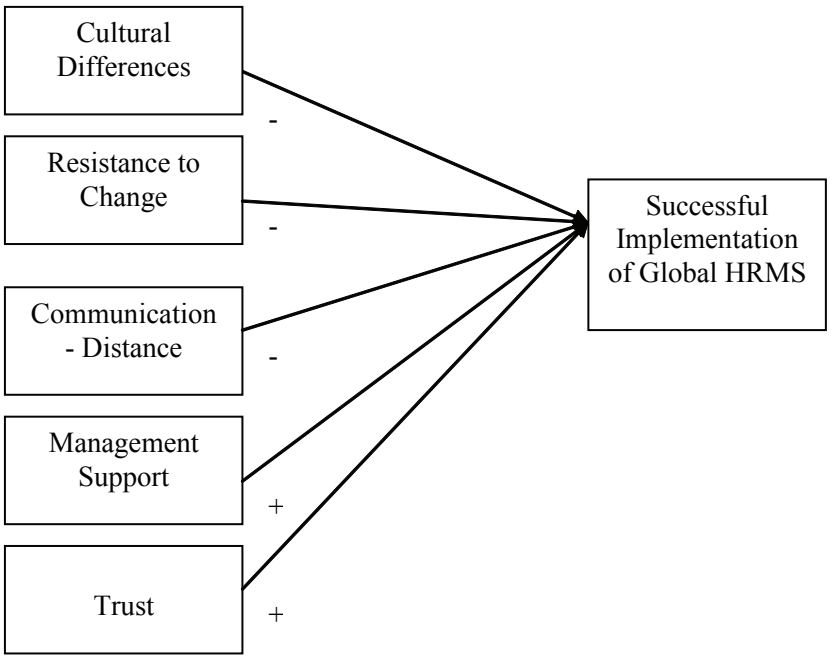
Trust can be developed using different methods. For example, Fisher and Fisher (2001) find that good communication is key. Interactions with team members should be predictable, honest, and consistent. This will help other team members learn to trust each other. Another recommendation is to remain visible and accessible. This can be a challenge when working across many time zones, but it is imperative to gain the trust of the team. Taking the initiative to check e-mail or take phone calls during off-hours can be an extremely effective means for building trust.

Evaristo (2003) states that a reason for mistrust among individuals is "lack of knowledge about rationale for past or present behaviors and intentions" (p. 62), which also influences risk taking of an unknown situation. Issues of trust can sometimes be resolved by having face-to-face meetings. If meeting face to face is not possible, having social time—even if over the phone—can give other team members a chance to get to know each other. This can improve relationships and help open up communication.

Model Presentation

Figure 1 depicts the research model, which consists of five success factors and their influence on the successful global implementation of ERP software. The success factors were chosen based on existing literature on global software implementations and (global) ERP implementations. These five factors were then used to evaluate the implementation of the HRMS module at Global

Figure 1. Research model



Software Inc. As mentioned previously, due to Global Software Inc.'s time constraints, the HRMS module was the scope of the "go-live" implementation and the focus of this study.

It is important for global implementation teams to include team members from different locations and different cultures. It is also important for all team members to have open and close communication channels throughout the project. Resistance to change must be mitigated through promoting understanding and goal alignment for all project stakeholders. Strong management support will facilitate motivation and alignment of efforts. Finally, trust appears to facilitate initial system adoption and further acceptance and use.

METHOD

The global HRMS implementation at Global Software Inc. was a field study that was conducted post-implementation. The research was conducted using a combination of semi-structured interviews and a questionnaire. Both the interviews and questionnaire were grounded using existing literature and best practices to focus on how management support, cultural differences, communication-distance, resistance to change, and trust affect global ERP implementations. The interviews and questionnaire were administered to key global and U.S.-based personnel on the implementation team. The interviewees and survey respondents were chosen based on participation on the global project implementation team and availability. Individuals involved in the study were either global HR personnel or, if located in the United States, interacted extensively with global personnel and processes.

Global Software Inc. set up project teams for the United States, Europe, Asia, and South America (which included both Mexico and Canada). All HR functional areas had input to both the system requirements and the system setup. A support team, titled HRIS (Human Resources Information System), was already in place to assist with all areas of the implementation. The HRIS team

was responsible for learning all aspects of the software, project management, and user guidance (including training for the international groups). HRIS was able to travel occasionally to the regions, but budget constraints prevented the team from traveling frequently. HRIS conducted meetings by conference calls and made the commitment to be on call during implementation and post-implementation. The combination of global travel and the commitment to support have helped HRIS build a strong relationship with the international locations.

Go-live, January 1, 2005, was on time and on budget. A few snags were encountered, and the international locations used e-mail and telephone to inform the support team of issues. Front-line support was provided by the HRIS support team. Any issues that needed to be escalated were forwarded on to the systems support team, named MIS. The MIS team was responsible for security, hardware support, and general HRIS administrative functions (backups, server issues, etc.).

Due to the fact that the HRIS team was located in the United States, the time change differences for training and support issues varied quite a bit. The HRIS team had conference calls early in the morning or late at night. It was important for the other locations to have input regarding the system. These calls were typically informal so that the international locations could feel comfortable with the new system.

The United States had one or more representatives from all functional areas (payroll, benefits, compensation, HR generalist, training, etc.). The international teams had representatives from each country with HR personnel in place. A total of 29 team members participated on the project team (17 U.S. based, 12 non-U.S. based).

The semi-structured interview questions were developed to gather background information about the project and find out additional information about the potential issues that were faced by project team members. The questions were written to gather data in regards to the five factors (cultural differences, trust, management support, communication-distance, and resistance to change) identified by the evaluation of existing literature on global implementations and ERP implementations. A total of seven semi-structured interviews were conducted at various locations—mostly outside of the place of business being studied. A few of the interviews were administered to global personnel over the phone. The interview data was evaluated to find key issues associated with the implementation. The interviewees were selected based on their availability and willingness to participate. We selected both non-U.S.-based and U.S.-based personnel who had participated on the global HRMS implementation team. Interviewees with a variation of job titles and departments were selected to get a broad range of experiences.

Additional data was gathered using a questionnaire. As no useful existing questionnaire was found that addressed the five success factors, we developed one specifically for this study. The questionnaire was administered online using Surveyz! software. A seven-point Likert scale was used. We selected the questionnaire respondents by viewing the project participation listing and identifying those individuals who had interaction with the global HRMS implementation. Seventeen individuals were contacted by e-mail and were informed that participation was completely voluntary and confidential. Of these 17, 14 completed the questionnaire. Seven of the 14 were U.S.-based team members and seven were non-U.S.-based team members.

The project role and location data are displayed in Tables 1 and 2. The location data is broken down by specific location. The project roles that responded as "Other" were: Interface and Report Specialist/IT PM, End User (2), Regional HR Head/Stakeholder, HR Personnel, and one blank "Other" response.

Using multiple instruments to collect data allowed for comparison and contrast of the information, which allowed the opportunity to collect richer data. Although both the semi-structured

Table 1. Respondent roles

Project Role	Number of Respondents
Project Manager	3
Subject Matter Expert	3
Executive Sponsor	1
Other	6
Left Response Blank	1

Table 2. Respondent location

Location	Number of Respondents
United States	7
Non-United States	7
(UK)	*1*
(Spain)	*1*
(Brazil)	*1*
(Argentina)	*1*
(Canada)	*1*
(Singapore)	*2*

interview questions and questionnaire were developed based on the five success factors, we were open to gathering any information that could lead to additional success factors. The semi-structured interview questions and survey instruments can be found in Appendices A and B.

RESULTS

Most team members felt that the implementation was a success, although some were neutral and some disagreed completely. Additionally, many team members defined success to be that the system was implemented on time and on budget. All of the data from the previous system was correctly converted into the new system and payroll processing was on time. However, when further analysis of the data was performed, it was evident that from a global perspective the implementation was not a success. Many respondents commented that the software was not a good fit for the global team and that the HRMS software was not being utilized as it was intended to be. The system was implemented to improve global data entry processes, yet some of the non-U.S. locations were still using spreadsheets to track data. The system was not an improvement for them.

Table 3 shows the quantitative results for global HRMS success.

The average mean and standard deviations for the different success factors are shown in Table 4. The mean calculations are based on a seven-point scale, meaning that all of the averages for the questionnaire answers are on the positive end of the scale. The number of respondents that participated in the research represented a majority of the global implementation team participants. Due to the small number of participants, some of the statistical analysis should be interpreted only as an indicator of problems with the implementation.

Table 5 shows Cronbach's alpha for each of the variables. The numbers for both global HRMS success and resistance to change are low, but at least over .6. This indicates that the internal consistency is fair. This is likely due to the small sample population. However, management support and communication-distance are both over .8, which is considered good reliability.

Communication-distance data collection took many aspects of communication into account. For instance, the distribution of the team across several different time zones affected the group's ability to meet as a whole. Time zone differences led to delays of half a day or longer in getting responses from the U.S.-based corporate location. The delay in response time was obviously

Table 3. Global HRMS success

Success Factors	U.S. Mean	Non-U.S. Mean
The implementation of the global HRMS was a success.	5.43	5.0
My region had a successful implementation.	6.14	5.14
The global Human Resources Management System (HRMS) implementation was completed on time.	6.0	5.29
The data in the HRMS contains valuable global information.	5.43	5.0
The HRMS implementation was completed with input from the global regions.	5.71	6.29
The HRMS improved the process for global data entry.	5.0	4.86
Overall Mean	5.62	5.26

Table 4. Overall averages for variables

Variable	Average Mean	Standard Deviation (Average)
Global HRMS Success	5.44	1.2
Management Support	5.73	1.06
Resistance to Change	5.63	1.33
Communication-Distance	5.63	1.21
Trust	5.34	1.53
Cultural Differences	5.34	1.44

Table 5. Cronbach's alpha for research variables

Variable	Cronbach's Alpha
Global HRMS Success	.629
Management Support	.854
Resistance to Change	.664
Communication-Distance	.884
Trust	.718
Cultural Differences	.772

frustrating to both parties. Some team members felt disconnected from the group, with limited ability to voice their opinions.

Geographic distance also limited face-to-face meetings. Travel to the different locations was costly, and only a few trips were made during the project. The entire team experienced frustration, since the regional teams and the U.S.-based team had difficulty communicating and making decisions effectively.

HR had personnel located in the United States, Brazil, Argentina, Canada, India, Singapore,

Spain, the United Kingdom, and France. The HRIS support team had difficulty managing communications with that magnitude of time difference. Both departments had job duties to perform besides the HRMS implementation and had to strike a fine balance to keep the project moving forward.

Language was also an issue for the global team. English was the second language for a majority of the global team members, creating some communications barriers. Additionally, the system itself created language barriers. For example, many countries do not use the same terminology for differentiating between employee job categories. However, because this was a requirement for corporate reporting, these terms had to be taught to the global HR employees.

Issues regarding trust did not show up in the respondent results. Although the team members were not able to communicate frequently as a whole, overall they felt that they were able to get to know their teammates and could be open about their feelings and opinions to other team members.

A key cultural difference between the U.S.-based and non-U.S.-based locations was the work environment. For example, the number of vacation days/legal holidays varied greatly among the different countries. Schedules had to be adjusted to allow for these differences. Most members of the respondent population felt that their needs were taken into consideration and that misunderstandings between team members were alleviated in a timely and appropriate manner.

The main theme associated with cultural differences was that payroll data entry processes did not improve for the global population. The system did not necessarily add value to the international HR team. The perception among respondents was that the system functionality did not match with the processes and needs of the locations outside of the United States.

Management support was present throughout the implementation project. The interview and questionnaire results both indicate that management support positively influenced the success of the global implementation. Notwithstanding their overall appreciation of management's support for the global implementation, respondents felt at times that issues were not easily resolved by the HR steering committee (which consisted of global executive HR management). The steering committee members were selected to provide management support both for system issues encountered during the implementation and to communicate the goals and expectations of the entire project.

Resistance to change did not clearly show up as an issue encountered by the Global Software Inc. implementation team. However, some respondents commented on the quality and amount of training for the software. Many of the hours spent showing the system to the non-U.S. population were performed over-the-phone using videoconferencing. Groups found this mode hindered their ability to learn. There was some initial resistance to the new tool, but primarily because the system did not follow the existing processes.

Many of the interviewees mentioned that there was a United States vs. non-United States mentality. The difference was partially due to the fact that the HRMS software was not needed to run payroll in locations outside of the United States. The system was chosen because 80% of the total requirements were met. However, many locations felt that the system did not meet their regional requirements. Team members felt that the non-U.S. locations should have been more involved earlier in the decision-making process for the selection of the HRMS tool. Both U.S. and non-U.S. team members commented that the system was not a true global system. This fact hindered acceptance of the system by the global team. The success of the implementation was affected because the system did not provide value for the HR team members outside of the United States.

In summary, the semi-structured interview/ questionnaire results validated the issues related

to global HRMS/ERP implementations that were identified in the literature. The issues identified in both the literature and the respondent data provide an excellent starting point for future research on how these issues affect the success of global HRMS implementations. Future research could also be expanded to include additional success factors not evaluated for this particular field study.

DISCUSSION

This field study examined one instance of a full-scale global ERP/HRMS implementation. Overall, the interviewees had a positive response to the system. That being said, a limiting factor of the responses was that many of the respondents commented that the system was successful based on an on-time, on-budget implementation. The factors contributing to implementation success confirmed many factors identified in the literature and introduced some additional ones.

Although the implementation experienced some problems, the semi-structured interview results indicate that overall it was a success. The software chosen met 80% of the requirements for all locations, but because the processes in different locations differed significantly, the software needed customization to work as users in the various regions envisioned. The respondents that indicated that the project was a success considered it so because the system was implemented on time and on budget. From the perspective of the locations outside of the United States, however, the implementation was not a success. Many of the team members outside of the United States experienced frustration because a majority of their customizations were not available at system go-live. Many customizations were pushed back due to time and budget constraints. Some of the core functionality necessary to improve day-to-day job function was not evident.

The questionnaire results support the interview results. Both show that the project overall was a success; however there were mixed feelings about the success of the system from the perspective of the non-U.S.-based locations. The questionnaire results indicate that while the project was seen as a success, data entry did not improve for the locations outside of the United States.

Responses of the U.S.-based participants and the internationally based participants differed in a few respects. For example, the questionnaire item "the implementation was the United States versus the rest of the world" had a higher mean for the international respondents than for the United States respondents. However, there appears to be no consistent pattern of disagreement.

The interview/questionnaire results validated the issues previously noted in the literature as related to global HRMS/ERP implementations. Table 6 shows which research results also appeared as factors in the literature review. The research indicates that the success of a global HRMS implementation is positively influenced when management support and trust exist, and resistance to change, communication-distance, and cultural issues are resolved.

CONCLUSION

The success of the global HRMS implementation in this case study was influenced by management support, communication-distance, alleviating resistance to change, and working out cultural differences. Of these factors, management support had by far the strongest influence as indicated by both questionnaire and interview results. Executive management was initially the driving factor behind the implementation, and this support and initiative continued from project inception through implementation.

The team experienced a few issues regarding communication, but overall the commitment to ensuring that the global team members were

Table 6. Comparison of research findings and literature review

Research Findings	**Factor in Literature Review**
Communication-Distance	
Time zone differences made it difficult to communicate	Yes
Response time issues between locations	Yes
Participants had support	No
Steering committee global members did not participate	Yes
Meeting times were not always convenient	Yes
Lack of face-to-face time	Yes
Cultural Differences	
Work ethic/work environment	No
Custom/regulation issues	Yes
Language–ESL	Yes
Communication barriers	Yes
Management Support	
Executive HR allowed team to make decisions	Yes
Globally, not a good fit	No
Steering committee formed with regional directors	Yes
Resistance to Change	
Resistance to training from global team members	Yes
Tool not meant to be used globally, which caused resistance	No
Global HRMS Success	
Was on time/on budget	No
Global data entry process did not improve	No
Software not intended to be used globally	No

included in the implementation process helped prevent the project from failing completely. The HRIS department provided support at all hours of the day, giving the global members the opportunity to work out problems and communicate issues. By incorporating weekly calls into team schedules, team members had time to build rapport and get to know one another personally. These personal relationships helped build trust and alleviate cultural issues as well. In fact, the global team member questionnaire respondents had a surprisingly positive response to the questions related to communication-distance, trust, and cultural differences. Time zones did create issues with the ability to communicate, but the implementation team was able to work around these.

The factor that negatively influenced the implementation success was the choice of software for the company. Many team members mentioned problems of organizational fit and the software functionality. The software was not designed to be used in locations other than the United States and Canada, causing many frustrations among the regions outside of the United States and preventing the improvement of global data entry processes. The fact that the regions were still using spreadsheets to track employee data indicates that the software did not support their

day-to-day functions. Research findings from both U.S.-based and global participants also validated this inhibitor. This factor was not included in the research because the executive management chose the software based on the fact that 80% of the software requirements were met. However, as was indicated above, there were problems related to software choice for the non-U.S.-based locations. Interview respondents indicated that many of the issues were not known until the implementation was well underway.

A few research limitations should be noted. The number of team members outside of the United States was small. With the sale of the global division of the company after the project completion in 2005, the number decreased further when global team members were no longer employed by the company. Fortunately, the researchers had built rapport with the global members. Nearly all of the team members contacted were willing to participate as respondents. The small team size likely affected some of the statistical analysis, but the numbers were helpful to look for further indication of positive or negative influence on the success of the implementation. The research was conducted post-implementation and after the non-U.S.-based team members were acquired by another company. This is an additional limitation and could have affected the opinions of the interview and survey respondents.

Not all of the questionnaire respondents participated in semi-structured interviews, so it is possible that the individuals interviewed did not perceive issues in areas of trust and cultural differences. With more background information, variance could be measured and conclusions could be drawn as to whether or not the respondents in the United States had different perceptions than those located outside of the United States. The short data collection period could have impacted the perceptions of the respondents. Further development and validation of the survey instrument used would be desirable. Testing a larger population of organizations would strengthen the statistical power of the survey.

FUTURE RESEARCH DIRECTIONS

This case study evaluated one company's experience with a global HRMS implementation. Many of the processes for the locations outside of the United States did not improve, which indicates that the implementation was not successful. The authors would like to continue to research similar topics, extending the research to other companies' experiences with implementing global HRMS/ERP software. Surveying multiple companies will identify additional issues, and the data collected can help predict and alleviate some of the problems that companies face when implementing HRMS software globally. The data collected for Global Software Inc. could also be expanded to include future implementations of other ERP modules.

Much remains to understand about global ERP implementations. The current research points to the fit between organizational structure and global ERP implementations as an important issue. A related area of interest is the perceived success or failure of global information system (IS) implementations for organizations of varying structures. Finding critical success factors for global IS implementations from the views of different roles in an organization (e.g., management, IT project managers, IT staff, or end users) will be key to alleviating future software implementation failures.

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APPENDIX A: SEMI-STRUCTURED INTERVIEW QUESTIONS

1. Tell me a little about your background with Global Software Inc. (i.e., position, title, etc.).
2. How were you involved in the decision to implement a global HR system?
3. What was your role in the project?
4. What were some of the challenges that occurred during the implementation strictly because the software was being implemented globally? Do you think any of these could have been prevented?
5. What were the reactions from executive management throughout the implementation?
6. How do you think the regions felt regarding the fact that the United States was the main driving force behind the project?
7. Do you think the implementation was a success? Why or why not?
8. What influences did management have on the decision to implement a global HR tool?
9. What was the reaction to training from a global standpoint?
10. Looking back at the project inception until now, how would you say that the HR department has changed (because of the global implementation)?
11. What cultural issues (if any) were associated with the implementation?
12. What issues did you think the implementation team faced in regards to the globally distributed locations?
13. How do you think the implementation team (yourself included) accepted the changes associated with implementing a global ERP system?
14. What do you feel that your impact was to the success or failure of the implementation?

APPENDIX B: SURVEY INSTRUMENT

Variable Name	# of Items	Questionnaire Item #s
Background Data	2	1-2
Global HRMS Success	6	3-8
Management Support	6	9-14
Resistance to Change	5	15-19
Communication-Distance	6	20-25
Trust	6	26-31
Cultural Differences	6	32-37

Questionnaire—Implementing a Global HRMS

(1) What was your role in the global HRMS implementation project?

__ Project Manager
__ Developer/Programmer/Software Engineer
__ Business Analyst
__ Subject Matter Expert
__ Executive Sponsor
__ Other, please specify _____

(2) Where were you working during the HRMS implementation?

__ United States
__ Other, please specify _____

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

Note: All questions from #3 on use the same seven-point scale (shown above).

(1) The implementation of the global HRMS was a success.
(2) My region had a successful implementation.
(3) The global Human Resources Management System (HRMS) implementation was completed on time.
(4) The data in the HRMS contains valuable global information.
(5) The HRMS implementation was completed with input from the global regions.
(6) The HRMS improved the process for global data entry.
(7) HR management was involved with making decisions related to the implementation.
(8) HR management was aware of the accomplishments of the global HRMS project.
(9) Issues that were unresolved during the global HRMS project could be escalated and resolved in a timely manner.
(10) My opinion was important, and my managers trusted me to make good decisions during the project.

(11) The steering committee was open to resolving issues related to the global HRMS implementation.
(12) Goals and milestones were adequately communicated from management to the implementation team.
(13) I feel comfortable learning new systems.
(14) Implementing a global tool will help the organization.
(15) The HRMS made my job easier.
(16) Improving the global data entry process is valuable to the company.
(17) I was able to easily fit processes that resulted from the HRMS implementation into my job duties.
(18) I was able to easily communicate with others on the implementation team.
(19) I had support available any time that I needed it.
(20) During global implementation team meetings, I was able to voice my opinions easily.
(21) It was comfortable to speak with many different team members on conference calls.
(22) My opinions were needed at meetings during the implementation.
(23) Meetings held throughout the implementation were at convenient times.
(24) When I was unable to participate in tasks, I trusted my teammates to communicate my opinions.
(25) During the implementation I got to know my other teammates well.
(26) If my other teammates volunteered to complete a task, I could rely on them to finish that task without follow-up.
(27) The implementation was United States vs. the rest of the world.
(28) I could be open and honest about my feelings during the implementation.
(29) I could relate to the other members on the implementation team.
(30) Everyone put a good effort into making the HRMS implementation a success.
(31) I was able to take part and share my opinions in the global implementation of the HRMS system.
(32) If I misunderstood something my teammate was trying to say, I had the opportunity to communicate until we both understood.
(33) My needs were taken into consideration during the global HRMS implementation.
(34) My teammates were able to reach consensus across the globe.
(35) Overall, the HRMS was a good value to my region.