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An Evaluation Framework for Communication and Coordination Processes in Offshore Software Development Outsourcing Relationship: Using Fuzzy Methods

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ABSTRACT Offshore software development outsourcing (OSDO) is a modern business strategy for producing high-quality software at a low cost. The OSDO refers to the practice of contracting to an offshore (extrinsic) organization to perform some or all software development work of a product. For the benefit of the OSDO vendors, this paper aims to develop a “communication and coordination challenges mitigation model” (CCCMM) that provides solutions for unambiguously defined communication and coordination processes in global software development (GSD) environment. Our proposed model is based on the fuzzy multi-attribute decision-making (FMADM) approach incorporating the capability of group decision-making. The FMADM approach is used both in the ranking of survey and assessment of case studies. First, the authors undertook a systematic literature review (SLR) that identified all cited challenges from a set of 101 articles. We identified 18 problem areas faced by the GSD vendors in OSDO relationships. Of these, six were ranked as critical. For the purpose of identifying corrective interventions, a second SLR was conducted that revealed 75 remedial measures extracted from 63 chosen articles. To validate our SLR findings, we surveyed 42 outsourcing experts from six countries. We also categorized six critical challenges and 75 corrective practices into four mitigation levels based on CMMI, SOVRM, and SOPM. In addition, two case studies were conducted to evaluate CCCMM outcomes in OSDO companies. The assessment results of the first case study do not recommend Company-A for the successful implementation of level-2 of the CCCMM, so Company-A stands at level-1. We have observed from the second case study that Company-B has implemented all the critical challenges of the level-2 only; therefore, Company-B is at level-2 “success” of the proposed assessment model.

INDEX TERMS Software outsourcing, systematic literature review, survey, case study, fuzzy multi-attribute decision-making, challenges, practices and mitigation levels.

I. INTRODUCTION

Globalization affects business models for companies that develop an international market and seek the competitive

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advantages of reduced costs and increasing productivity. Many such companies are engaged in software development and are no strangers to the adaptive measures of developing software by using software development teams that are remotely scattered around the globe, a process known as Global Software Development (GSD) [1]–[3]. As a highly

dynamic and crucial component of a company's business model, selecting the best GSD locale to outsource software developmental operations bears substantial influence on successful outcomes [4].

Global Software Development (GSD) has revolutionized conventional software development practices, especially since the conventional software market entered the era of smart handheld devices with operating systems like iOS and android, mobile applications, games and social networking applications. Definitions and building blocks for utility software as well as operating and computers systems have completely changed and a large number of state-of-the-art tools and technologies are abundantly available, especially as software development accelerates and floods the market with innumerable applications. Under these circumstances, traditional approaches to software development fail to meet requirements of contemporary trends in the IT industry. Consequently, increasingly supple approaches have been designed for conventional software development that have precipitously replaced traditional methods [5], [6]. Hence, legacy designs for these agile processes require modification to suitably attend 'latest trend' software development [5].

Agile Software Development benefits GSD by emphasizing customer collaboration, individual interactions, continual collection of necessities and the deliverance of a software product within both time and budgetary constraints, etc. [6], [7]. Hence, GSD is gaining a rapidly advancing position that offers a number of advantages to clients and vendors. These benefits include geographic proximity to end-process consumer, competitive advantages, access to global talent pools and vendor opportunities to access new markets [8]. GSD also offers onshore organizations access to local knowledge, market proximity, flexible response modalities and response time in the face of diverse local opportunities, and access to highly qualified skilled human resources — all at lower costs [7], [9].

The major reasons that support GSD's dramatic growth are (i) round-the-clock development; (ii) access to highly qualified skilled personnel; (iii) the production of high quality software at low cost; (iv) and access to state-of-the-art Information and Communication Technologies (ICTs) [4], [7], [10]–[12]. Furthermore, the online availability of resources, skills, better business and economic environments, and the ready availability of highly qualified professionals in software outsourcing destinations like China, India, Pakistan etc. have all combined to create the present GSD reality [10], [13]. As the world shrinks to a global village, software development processes pursue the cooperation and coordination of multiple teams that are spread across the globe and which possess unique capabilities and skills [14]. Moreover, studies indicate that the Collaborative Software Development model has several advantages that include increased productivity and cost efficiency [14].

GSD typically involves stakeholders in different time zones and locations who hail from different national and

organizational cultures that may even utilize different technologies in their collaborations. These temporal, geographical and socio-cultural departures can present significant communication, coordination and control challenges that need to be addressed to better realize the benefits of GSD [15]. Khan and Ilyas [15] identified 'cultural difference' as a critical challenge that negatively affects the entire OSDO process. Similarly, the 'management of knowledge sharing' is another important factor that is negatively affected by the ambiguous nature of knowledge in the absence of synchronized communication caused by a geographic barrier [16].

Verner *et al.* [11] conducted a tertiary study and found numerous challenges which included the following: engineering issues, coordination of risk control measures, software component integration, cultural differences, issues involving the selection of an appropriate vendor, communication and collaboration, planning, software development processing, configuration management, training and architectural design.

II. BACKGROUND

Offshore outsourcing refers to contracts between a client and a geographically distant vendor [17]. Many software development companies competed over the last two decades to improve profit margins by (i) improving product-time-to-market outcomes; (ii) hiring software experts living in countries with lower labor costs; (iii) and defying the 'clock' by running projects 24 hours a day. As a result, a large number of software development projects were/are performed under a network of global distribution at many different sites located in several countries. This distributed management approach is called Global Software Development (GSD) or Global Software Engineering (GSE) [18]. Offshore Software Development Outsourcing (OSDO) (i.e., offshore outsourcing) is an important paradigm within GSE for the development of high quality but less expensive software by professionals in low-wage/overhead countries [4]. India, Ireland, China and Russia are major vendor countries while the US, UK, Australia and Japan are leading client countries [19]. India has the largest vendor-market share, followed by China [20]. Researchers also predict that China will overtake India within the next decade [20], [21]. Here are the top ten reasons why companies/organizations use software outsourcing [22]–[25]:

- Reduce and control operating costs;
- These specific functions are difficult to manage or out of control;
- Acceleration of re-engineering activities;
- The exploitation of offshore capabilities;
- Improve a company's focus;
- To free-up resources for other purposes;
- Reduce time to market;
- Gain access to world-class talent;
- Risk sharing;
- Resources not available internally.

The present research explores this area with an intensive effort to specifically identify significant risk factors that negatively affect OSDO communications and coordination efforts and also by classifying the most appropriate mitigating practices for vendors.

A. EXISTING WORK ON COMMUNICATION AND COORDINATION CHALLENGES IN OSDO

Communication and project coordination are the two major pillars that support successful OSDO relationships [26]. A lack of communication and/or effective project coordination unfavorably challenges any outsourced project [27] and when not addressed in time can lead to project failure. The major reason for such problematic occurrences is the geographical separation between client and vendor. Nonetheless, effective OSDO relationships thrive when communication and project coordination processes are optimized.

Poor communication and ineffective project coordination are major challenges to distributed software development [28] that often cause project failures [29]. As such, time zone and cultural differences appear to be the most significant communication challenges that negatively affect project coordination [30].

According to Niazi *et al.* [31], outsourcing projects with closer geographic and time zone proximity allow for more communications compared to projects assigned to vendors at a greater distance and disparate time zone. They reported that greater geographic dispersion and time zone disparity in distributed projects hamper communication and project coordination. Language differences also complicate OSDO communication and coordination [32], [33]. Language barriers can prevent the implementation of new processes throughout an enterprise and also constrain necessary feedback between diverse departmental agents. As such, language differences negatively affect the achievement of team goals and objectives while also aggravating extant problems in business operations by hindering effective team/project-leader cohesion [33]. Khan and Ilyas [15] identified various intercultural challenges faced by vendors in OSDO relationships and argued that cultural differences also negatively impact communication and thus impede collaboration and coordination processes between clients and vendors [15], [34].

GSD's high degree of popularity is largely due to tremendous growth in Information Communication Technology (ICT), although high costs and a lack of ICT technology can hamper communication and coordination processes in offshore software outsourcing [11], [35]. Trust is another basic factor that affects software outsourcing relationships [36]. Achieving and preserving trust in OSDO projects is a particularly important element, especially for dispersed team members that are also culturally and temporally distant [37], [38]. OSDO communication and project coordination processes also suffer a lack of informal face-to-face contacts that multiply challenges to outsourcing organizations [39], [40]. The lack of casual fraternization can

distort communications by a lack of confidentiality and even healthy resistance (criticism) that then allows the transmission of incomplete/incorrect data with un-cooperative social overtones resulting in rumors, misunderstandings, mistakes and management difficulties— all of which lead to a loss of control and project failure [41].

B. RESEARCH GAPS AND IMPETUS

This study identified, by undertaking both the Systematic Literature Review (SLR) and an Empirical Study, the problematic causes of failure and poor outcomes in OSDO communications and project coordination.

Moreover, and especially as India boasts more than half of all CMMI level-5 companies in the world [42], we further noted the use of certification criteria to qualify software standards and models in the selection process of OSDO vendors. Hence, we hope that the present work will enhance the contemporary qualifying model by adding meaningful metrics to OSDO vendors who seek to identify, analyze and respond to communication and project coordination challenges with validated solutions.

Four research questions (RQs) determined this study's guidelines:

RQ1. What communication and coordination challenges, as identified by a qualified literature search and empirical study, are confronted by OSDO vendors?

RQ2. From the vendor's perspective and as identified by a qualified literature search and empirical study, what solutions/practices have been employed to address communication and project coordination challenges in OSDO relationships?

RQ3. How can the CCCMM be developed based on input from RQ1 and RQ2?

RQ4. Is the CCCMM practically robust in terms of measuring and mitigating communication and coordination challenges faced by vendor organizations in OSDO relationships?

III. COMMUNICATION AND COORDINATION CHALLENGES/PRACTICES DETERMINING METHODS AND FRAMEWORK

This study developed a Communication and Coordination Challenges Mitigation Model (CCCMM) for software outsourcing organization evaluation based on the structure of CMMI and fuzzy multi-attribute-decision making (FMADM) approach [43], [44] taking various critical communication and coordination challenges as main, while its implementation practices as sub-criteria. Methodology for the development of proposed model is shown in Fig. 1. Details are given as follow:

In this study, we propose an analytical model for software outsourcing vendor organizations, using FMADM approach, to evaluate their ability towards communication and coordination relationship formation. Our proposed CCCMM framework consists of five main stages, as shown in Fig 2.

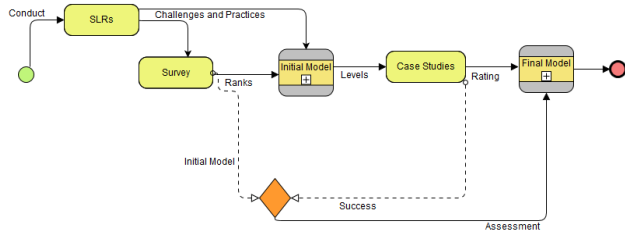


FIGURE 1. Methodology for the development of proposed model.

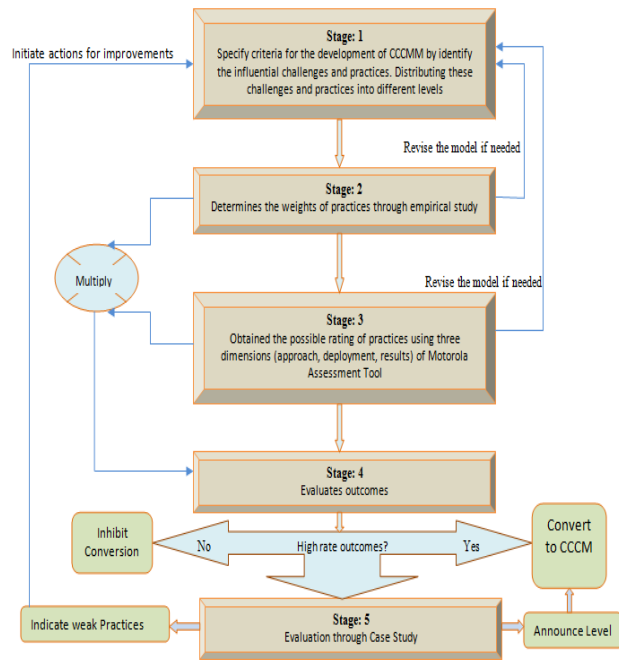


FIGURE 2. CCCMM framework for evaluation communication and coordination process.

A. CONDUCTION OF SLRS

Stage-1: Identification of communication and coordination challenges and its practices, and framing them into model form

In stage-1, two SLRs were executed to extract relevant data [45]: one to identify communication and coordination challenges and another to identify practical solutions [46], [47]. We used the SLR approach as a major tool in previous studies [48]–[50], as it methodically supports primary assessments [45] and for which we transcribed SLR protocols (taken from [49]) to formulate a strategic plan for the present work. According to Kitchenham and others [25], [45], [51]–[54], the SLR process comprises three main stages: planning, conducting and reporting, we have identified 6 critical communication and coordination challenges (CCCC) and 75 practices from a sample of 164 papers.

B. CONDUCTION OF EMPIRICAL STUDY

Stage-2: Obtaining the importance weights of the critical communication and coordination challenges and its practices

In stage-2, we conducted a survey of forty-two (42) OSDO experts to validate SLRs findings and to find other

important challenge(s) and practice(s). An empirical survey is an experiential investigation that obtains qualitative and/or quantitative descriptions from a sample population. It is the most widely used data collection tool in the collection of implicit data for a problem of interest or meticulous occurrence [38], [55], [56]. Other investigators have adopted a similar approach [23], [24], [38], [57]. The findings of this stage are presented in table 5. In the light of the outcomes of the survey, we have revised the model. The survey also validated the initial grouping of the critical communication and coordination challenges and its practices into different mitigation levels.

C. CONDUCTION OF CASE STUDIES

Stage-3: Obtaining the possible implementation of the critical communication and coordination challenges and its practices

In stage-3, we have conducted a case study in OSDO organizations. The aim of the case study was twofold 1) to check the practicality of the proposed model and 2) to find the possible rating of the critical communication and coordination challenges and its practices. For rating, we use the dimension and guidance of the Motorola Assessment Tool [58], as given in table 3. The outcome of this stage is summarized in table 7. In the light of the case study results, we have revised the proposed model.

We used case study tool for the evaluation of CCCMM, because it consider a powerful tool to provides useful real world information [59]. Two case studies were conducted to evaluate CCCMM’s effects on OSDO client-vendor relationships. To support each case study, focused group sessions were also held with participants to obtain feedback on the proposed CCCMM. We employed a case study method as a validation tool to reveal critical data in a coincident software industry environment [59]. A real-time approach produces valuable insights that are crucial to problem solving strategy [60], especially as the proposed CCCMM applies to OSDO praxis.

The assessment results of each company are shown in table 8 and 9.

The possible implementation weight of practice for offshore software development outsourcing relationship with regard to each critical communication and coordination challenges is calculated as follows:

Step 1: The participants in the case study was requested to provide their independent views about the extent of implementation of each practice in their organization from the three dimensions of Motorola Assessment Tool by choosing linguistic term as shown in table 2 and incorporating the Motorola guidelines as given in table 3.

Step 2: The linguistic terms are then transcribed into corresponding TFN an example based on critical communication and coordination challenge 2: “Lack of ICT/Technological Cohesion” are shown in table 7.

Step 3: Three-dimensional scores in TFN format are then converted to an average score in the same TFN format using (10) as shown in table 7.

Step 4: To aggregate the subjective judgments of the participants towards the implementation of practices (because the perception of each expert is different due to their role, experiences, and education level etc).

Equation (14) is used to get the synthesized TFN as listed in table 12 column 2 (see Appendix C for table 12).

Step 5: Then defuzzification of the TFN is carried out to obtain BNP in the crisp format using (15) as shown in table 12 column 3 and 4 (see Appendix C for table 12).

D. IDENTIFICATION OF CRITICAL COMMUNICATION AND COORDINATION PRACTICES AND FRAMING THEM INTO MODEL FORM

Stage-4: Evaluate the outcomes

In stage-4, we evaluate the outcomes of stage 3. If high rate outcomes are obtained, then the successful conversion will be announced, otherwise, failure will be announced. In either case, we will proceed to next stage. We have also distributed the identified critical challenges and its practices into four mitigation levels based on the structure of CMMI [61], IMM [62], SOVRM [63], SOPM [50] and SPIIMM [2] as shown in Table 4.

The critical communication and coordination challenges and its practices are categorized into four mitigation levels as shown in Table 4. The practices for these critical challenges are listed in Appendix-D (Table 13). The code CnPm presented in Table 4 means practice m for critical communication and coordination challenge n.

The proposed CCCMM holds four mitigation levels and each level addresses different critical communication and coordination challenge. For each critical challenge various practices are assigned as implementation guides. In order to attain a particular mitigation level, vendor organizations need to adopt each practice for that particular level. These four CCCMM levels are discussed below:

- **Level 1:** Adopted from SOVRM and CMMI (as is).
- **Level 2:** 'Communication'; focus is to appropriately address communication challenges. This level holds two critical communication challenges and twenty-two practices.
- **Level 3:** 'Proximity'; focus is to appropriately address all cultural, geographical and language differences. This level holds three communication and coordination challenges and thirty-six practices.
- **Level 4:** 'Coordination'; focus is to good coordination of all outsourcing activities with the client. This level holds one critical communication and coordination challenge and seventeen practices.

These four CCCMM mitigation levels have been established as sufficient to categorize vendor awareness for OSDO business relationships. Like CMMI, IMM, SOVRM and SOPM, challenges or factors and its practices were also distributed between the different levels. Appendix A lists

TABLE 1. Linguistic terms for weighting practices.

Linguistic Terms	Corresponding weight of importance
Extremely Agree	(0.9, 1.0, 1.0)
Moderately Agree	(0.7, 0.9, 1.0)
Slightly Agree	(0.5, 0.7, 0.9)
Neutral	(0.3, 0.5, 0.7)
Slightly Disagree	(0.1, 0.3, 0.5)
Moderately Disagree	(0.0, 0.1, 0.3)
Strongly Disagree	(0.0, 0.0, 1.0)

TABLE 2. Linguistic terms for rating practices.

Linguistic Terms	Corresponding weight of importance
Outstanding	(0.9, 1.0, 1.0)
Fully Implemented	(0.7, 0.9, 1.0)
Marginally Implemented	(0.5, 0.7, 0.9)
Fair	(0.3, 0.5, 0.7)
Weak	(0.1, 0.3, 0.5)
Poor	(0.0, 0.1, 0.3)
Very Poor	(0.0, 0.0, 1.0)

the corrective practices assigned to each challenge included in the CCCMM's mitigation levels. All remedial practices included in the final list derived from industry practitioners who acknowledged the mass real-life outsourcing experiences. Nonetheless, we did a thorough review to remove iterations.

Stage-5: Assess the OSDO organization through proposed model

After the assessment, the model will indicate weak critical communication and coordination processes in case of failure, while in case of success; the model will announce the mitigation level and further improvements direction.

E. OBTAINING THE IMPORTANCE WEIGHTS OF THE CHALLENGES AND ITS PRACTICES

This study presented an easy way to grasp linguistic terms, parameterize using triangular fuzzy numbers (TFNs), to express subjective agreement or disagreement about the significance of various practices. We were interested in findings the importance weight because not all of the practices are equally important.

A fuzzy set allocates the value of memberships to objects within its universe of discourse in a range of zero and one. Let U is a universal set whose elements are {u} then, a fuzzy set X is defined by its membership function as follows:

$$\mu_X(u) : \rightarrow U[0, 1] \quad (1)$$

which allocates to each {u} a grade of membership X in interval [0, 1].

Several articles have mentioned that the subjective fuzziness of human thoughts can be dispensed by incorporating fuzzy set theory [64]–[66]. For such circumstances, linguistic scale was recommended giving a practical means of unfolding. We have incorporated seven points linguistic scale for assigning the importance weight of communication and coordination practices as shown in table 1.

Similarly, seven linguistic variables as shown in table 2 based on Motorola Assessment Tool [58] are provided to

TABLE 3. Key evaluation dimensions of motorola assessment tool.

Score	Approach	Deployment	Results
Very Poor	<ul style="list-style-type: none"> Practice not evident OR No organizational ability OR No management appreciation of need 	<ul style="list-style-type: none"> No part of the company uses the practice OR No part of the company express interest 	<ul style="list-style-type: none"> No change
Poor	<ul style="list-style-type: none"> Poor organizational ability OR Poor management recognition of need OR Poor organizational commitment 	<ul style="list-style-type: none"> Some part of the company uses the practice OR Some part of the company express interest 	<ul style="list-style-type: none"> Ineffective
Weak	<ul style="list-style-type: none"> Support items for the practice start to be created OR Little parts of the company are able to implement the practice OR Management starts to recognize needs 	<ul style="list-style-type: none"> Fragmented or inconsistent use of practice OR Implemented in some parts of the company OR Use subject to verification/ monitoring in some parts of company 	<ul style="list-style-type: none"> Inconsistent results OR Spotty results OR Indication of effectiveness only for some parts of the company
Fair	<ul style="list-style-type: none"> Procedure for practice implementation defined OR Numerous supportive items for the practice in place OR Widespread but not full commitment by management 	<ul style="list-style-type: none"> Use subject to verification/ monitoring in several parts of company OR Less fragmented use or uniformity in use OR Used in some major parts of the company 	<ul style="list-style-type: none"> Unpredictable results for other parts of the company OR Reliable and positive results for some important parts of the company
Marginally Implemented	<ul style="list-style-type: none"> Supportive items in place Some management becomes preemptive and assure implementation Practice implementation across every part of the company 	<ul style="list-style-type: none"> Use subject to verification/ monitoring in all of the company Practice used in many parts of the company Practice mostly stable across various parts of the company 	<ul style="list-style-type: none"> Positive quantifiable results in maximum parts of the company OR Constantly positive results over time throughout the company
Implemented	<ul style="list-style-type: none"> Practice established as an essential part of the procedure Most of the administration is proactive Supporting items facilitate and encourage the use of practice Entire management is committed 	<ul style="list-style-type: none"> Verification/ monitoring of use for nearly every part of the company Installed in nearly every part of the company Constant use across nearly every part of the company 	<ul style="list-style-type: none"> Constantly positive outcomes with the passage of time across nearly every part of the company OR Positive measurable outcomes in nearly every part of the company
Outstanding	<ul style="list-style-type: none"> Management provides OR enthusiastic leadership and commitment OR Organizational excellence in the practice recognized even outdoor the firm 	<ul style="list-style-type: none"> Verification/ monitoring for every part of the company OR Consistent use with the passage of time throughout the company OR Universal and consistent set up in every part of the company 	<ul style="list-style-type: none"> Requirement exceeded OR Guidance sought by others OR Constantly world-class results

the case study organizations to rate the implementation of communication and coordination practices across the three dimensions (approach, deployment, results).

The procedure for obtaining the significance weights of practices are explained in the following steps:

Step 1: Translate the responses of the survey participant into a matrix A using scale as presented in table 2.

$$\tilde{A} = \begin{matrix} & R^1 & R^2 & R^3 & \dots & R^m \\ \begin{matrix} P_1 \\ P_2 \\ P_3 \\ \vdots \\ P_n \end{matrix} & \begin{bmatrix} \tilde{\alpha}_1^1 & \tilde{\alpha}_1^2 & \tilde{\alpha}_1^3 & \dots & \tilde{\alpha}_1^m \\ \tilde{\alpha}_2^1 & \tilde{\alpha}_2^2 & \tilde{\alpha}_2^3 & \dots & \tilde{\alpha}_2^m \\ \tilde{\alpha}_3^1 & \tilde{\alpha}_3^2 & \tilde{\alpha}_3^3 & \dots & \tilde{\alpha}_3^m \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ \tilde{\alpha}_n^1 & \tilde{\alpha}_n^2 & \tilde{\alpha}_n^3 & \dots & \tilde{\alpha}_n^m \end{bmatrix} \end{matrix}, \quad (2)$$

$j = 1, 2, \dots, n; \quad i = 1, 2, \dots, m,$

where n represent the total number of practices and m represent total number of respondent, $\tilde{\alpha}_j^i = (l\tilde{\alpha}_j^i, m\tilde{\alpha}_j^i, u\tilde{\alpha}_j^i)$ shows the fuzzy weight of the practices given by i th respondent for j th practice. One example, of the result, is given in table 5.

Step 2: Since the subjective evaluation of each participant vary with respect to their experience, role, perception, and understanding of the subject matter. Therefore, we incorporated the mean score approach to aggregate the fuzzy importance of each practices by m respondent.

$$\tilde{\omega}_j = \frac{1}{m} \left[\sum_{i=1}^m \alpha_j^i \right] \quad (3)$$

where $\tilde{\omega}_j = (l\tilde{\omega}_j, m\tilde{\omega}_j, u\tilde{\omega}_j)$ shows the aggregate fuzzy importance weight of the j th practice.

Step 3: The aggregated TFN $\tilde{\omega}_j$ is used to obtain the best non-fuzzy performance (BNF) value, BNP_{W_j} . BNP_{W_j} can be

TABLE 4. Preliminary CCCMM mitigation levels.

CCCMM Levels		Focus	Critical Communication and Coordination Challenges (CCCC)	Practices
S. No	Name			
1	Preliminary	This mitigation level can be best described as one of chaotic processes	Nil	Nil
2	Communication	The vendor has addressed approximately the communication challenges	CCCC1: Lack of Informal/Face-to-Face Communication CCCC2: Lack of ICT/Technological Cohesion	C1P1-C1P14 C2P1-C2P8
3	Proximity	The vendor has addressed appropriately all the cultural, geographical and language differences	CCCC3: Cultural Differences CCCC4: Geographical Dispersion CCCC5: Language Differences	C3P1-C3P13 C4P1-C4P15 C5P1-C5P8
4	Coordination	The vendor is coordinating well in all of the outsourcing activities with the clients	CCCC6: Lack of Credibility	C6P1-C6P17

produced through (4)

$$BNP_{W_j} = \frac{[(uw_j - lw_j) + (mw_j - lw_j)]}{3} + lw_j \quad (4)$$

Here, BNP_{W_j} represents the BNP value for the TFN $\tilde{\omega}_j$ while W_j is the importance weight of the j th practice in classical (crisp) number format.

Step 4: After the defuzzification of TFN in step 4, crisp numbers are obtained and normalized using (5).

$$R_j = \frac{W_j}{\sum_{j=1}^n W_j} \quad (5)$$

where R_j shows the normalized significance weight of the j th practice such that $\sum_{j=1}^n R_j = 1$.

We also calculated and normalized the crisp number for each practice within critical challenges R_{PC} and within level R_{PL} using (6).

$$R_{PC} = \frac{W_{PC}}{\sum_{PC=1}^k W_{PC}} \quad (6)$$

In (6) W_{PC} represent the BNP weigh of the each individual practice in the respective critical communication and coordination challenge, k represent the total number of practices in that critical challenge while $\sum_{PC=1}^k W_{PC}$ represent sum of the BNP weight of the all practices in that critical challenge.

$$R_{PL} = \frac{W_{PL}}{\sum_{PL=1}^h W_{PL}} \quad (7)$$

In (7) W_{PL} represent the BNP weight of the each individual practice in the respective mitigation level, while h is the total number of practices in that level.

$$W_C = \sum_{PC=1}^k W_{PC} \quad (8)$$

$$W_L = \sum_{PL=1}^h W_{PL} \quad (9)$$

Using W_{PC} (BNP weight of practice in critical communication and coordination challenge), we can calculate the W_C

BNP weight of each critical challenge by (8) and W_L BNP weight of each level by using (9).

F. OBTAINING THE EXTENT OF IMPLEMENTATION OF THE PRACTICES IN THE RESPECTIVE ORGANIZATION

The procedures for obtaining the extent implementation of the practices in the respective organization are explained in the following steps:

Step 1: Create three matrices \tilde{B}_A , \tilde{B}_D , and \tilde{B}_R for the extent of implementation of practices ($\tilde{P}_j, 1, 2, 3, \dots, n$). A, D and R represent the three dimensions of Motorola assessment tool as given in table 3 using (2). The respondent of the survey ($\tilde{R}^i, 1, 2, 3, \dots, m$) are then questioned to give their subjective opinions about the extent of implementation of each practice in their respective organization the guidelines of Motorola assessment tool as specified in table 3, by choosing linguistic term as given in table 2.

Where n represent the total number of practices, m represent total number of respondent and $\tilde{B}_j^i = (l\tilde{B}_j^i, m\tilde{B}_j^i, u\tilde{B}_j^i)$ shows the fuzzy implementation of the practices given by i th respondent for j th practice.

After getting the evaluation in three dimensions (\tilde{B}_A, \tilde{B}_D , and \tilde{B}_R), we obtained mean evaluation \tilde{B}_M by (10).

$$\tilde{B}_M = \frac{\tilde{B}_A + \tilde{B}_D + \tilde{B}_R}{3} \quad (10)$$

where M , represents mean or average. One example, of the result, is given in table 7.

Step 2: We aggregate the fuzzy implementation of each practice by m respondent using (3). The $\tilde{\omega}_j$ was replaced with \tilde{q}_j to represent weight in case study.

Where $\tilde{q}_j = (l\tilde{q}_j, m\tilde{q}_j, u\tilde{q}_j)$ shows the aggregate fuzzy weight of the j th practice.

Step 3: The aggregated triangular fuzzy numbers (TFN) \tilde{q}_j is used to obtain can be produced through (4).

(W is replace with Q in formula to represents weights in case study)

Here, BNP_{Q_j} represents the BNP value for the TFN \tilde{q}_j while Q_j is the crisp implementation of the j th practice in classical number format.

TABLE 5. Corresponding TFNs (Weighting) of CCC2: "Lack of ICT/Technological Cohesion".

Experts	Practices							
	C2P1	C2P2	C2P3	C2P4	C2P5	C2P6	C2P7	C2P8
E1	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.7,0.9,1.0)
E2	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E3	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E4	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(1.0,1.0,0.5)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E5	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.7,0.9,1.0)
E6	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E7	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)
E8	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)
E9	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E10	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E11	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E12	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.7,0.9,1.0)
E13	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E14	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E15	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)
E16	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E17	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E18	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)
E19	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E20	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E21	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E22	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E23	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.7,0.9,1.0)
E24	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)
E25	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E26	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E27	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.7,0.9,1.0)
E28	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)
E29	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E30	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,0.9,1.0)	(0.7,0.7,0.9)
E31	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)
E32	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E33	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)
E34	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E35	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,0.9)	(0.3,0.5,0.7)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)
E36	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)
E37	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.7,0.9,1.0)
E38	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,0.9,1.0)	(0.9,1.0,1.0)
E39	(0.9,1.0,1.0)	(0.5,0.7,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)
E40	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E41	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
E42	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)
wj	(0.90, 1.00, 1.00)	(0.84, 0.97, 1.00)	(0.81, 0.95, 0.99)	(0.74, 0.89, 0.96)	(0.88, 0.99, 1.00)	(0.84, 0.97, 1.00)	(0.76, 0.90, 0.98)	(0.81, 0.94, 0.99)

TABLE 6. Importance weight and possible ranking of the critical communication and coordination challenges (CCCC) and level.

CCCC	W_c	over all rank of challenge		Rank of CSF in level		Level	W_L	Ranks of level	
CCCC1	12.6929	0.1884	2	0.63271	1	2	20.061	0.297835	3
CCCC2	7.3683	0.1094	5	0.36729	2				
CCCC3	11.7095	0.1738	4	0.46488	2	3	25.188	0.373953	1
CCCC4	13.4786	0.2001	3	0.53512	1				
CCCC5	7.0698	0.1050	6	0.31980	2	4	22.107	0.328212	2
CCCC6	15.0373	0.2232	1	0.68020	1				

G. DETERMINING THE SUCCESS POSSIBILITY OF COVERSION TO MITIGATION

Once we get the weight of the practice R_j and implementation of the practice Q_j in the organization, then it is easy to obtain the possible success P_{success} by equation (11).

$$P_{\text{success}} = R_j \times Q_j \quad (11)$$

If the possibility of success is known then it is easy to find the possibility of failure by equation (12).

$$P_{\text{failure}} = 1 \times P_{\text{success}} \quad (12)$$

IV. EMPIRICAL CASES FOR ASSESSING THE POSSIBILITY OF SUCCESS OF COMMUNICATION AND COORDINATION PROCESS

As discussed in section III, in order to validate SLRs findings, we conducted a survey of forty-two (42) OSDO experts. An empirical survey is an experiential investigation that obtains qualitative and/or quantitative descriptions from a sample population. It is the most widely used data collection tool in the collection of implicit data for a problem of interest or meticulous occurrence [38], [55]–[57]. Other investigators have adopted a similar approach [23], [24], [38], [57].

A. STEPS FOLLOWED IN CONDUCTION OF EMPIRICAL STUDY

We have followed the following steps in conduction of questionnaire survey.

1) COLLECTION OF DATA AND INSTRUMENTS USED IN THE EXISTING EMPIRICAL STUDY

The main intention of the survey was to gather knowledge from the experience and opinions of industry practitioners in the context of client-vendor OSDO relationships. Hence, it is primarily qualitative research focused on a contextual socio-cultural phenomena with an observation to acquire impression of a complex area and toward survey the topic [55], [67]. Questionnaires surveys are mainly appropriate in favor of collection of qualitative data for the reason that they provide a chance in support of argument and investigation of innovative areas [55], [67]. We also used Google Drive a free online tool for the collection of data and as an instrument tool.

2) EMPIRICAL STUDY VALIDITY

Before deployment, five associate members of the SERG_UOM@YAHOOGROUPS.COM, with several years experience, tested the questionnaire survey and confirmed that it would take approximately thirty minutes to complete the survey. They also made suggestions for changes in delivery and question sequencing.

3) IMPLEMENTING THE QUESTIONNAIRE SURVEY

Before launching the survey, we mailed research summary and letter of invitation to websites such as “Yahoo, LinkedIn and Facebook” and Software companies at Pakistan. Further, we additionally requested the authors of relevant industrial papers¹ to participate in the survey. In reply, 110 professional experts consented to contribute, after which we sent them the questionnaire’s web link. We received a total of 48 completed questionnaire survey results in a predefined time frame. After pertaining qualification criterion, we excluded six (06) questionnaires. A total of 42 responses remained for further analysis. Of these, six experts were foreigners and the remaining 36 were Pakistani nationals.

4) DATA ANALYSIS STRATEGY

The 42 remaining responses yielded a 38.18% response rate for the survey.

5) DISCRIMINANT AND CONVERGENT VALIDITY

We have very high confidence that our existing study contributes to both academic and industrial venues regarding OSDO activities. Largely, the present findings complement our previous SLR [4], [46] contributions to the discipline while offering robust concurrence between SLR and empirical outcomes [68] that fill the gap between industrial experience and academic speculations regarding OSDO client-vendor relationships.

B. WEIGHT CALCULATION OF THE CRITICAL COMMUNICATION AND COORDINATION CHALLENGES AND ITS PRACTICES IDENTIFIED THROUGH EMPIRICAL STUDY

We have found 75 practices (see Appendix A) through SLR and validated it through a questionnaire survey in

¹These papers had already been selected through our previously published SLRs.

TABLE 7. Corresponding TFNs of Implementations of CCCC2: "Lack of ICT/Technological Cohesion".

CCCC2		Lack of ICT/Technological Cohesion							
E	D	Practices							
		C2P1	C2P2	C2P3	C2P4	C2P5	C2P6	C2P7	C2P8
E1	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.5,0.7,0.9)	(0.7,0.9,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.3,0.5,0.7)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.1,0.3,0.5)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.1,0.3,0.5)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.0,0.0,0.1)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.3,0.5,0.7)	(0.7,0.9,1.0)	(0.6,0.8,0.9)	(0.2,0.2,0.4)	(0.1,0.2,0.3)
E2	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.3,0.7,0.9)	(0.7,0.9,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.1,0.3,0.5)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.5,0.9,0.9)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.3,0.5,0.7)	(0.1,0.3,0.5)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.4,0.8,0.9)	(0.8,1.0,1.0)	(0.5,0.7,0.9)	(0.4,0.6,0.8)	(0.1,0.3,0.5)
E3	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.1,0.3,0.5)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.1,0.3,0.5)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.0,0.0, 0.1)	(0.0,0.0,0.1)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.3,0.5,0.7)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.2,0.2,0.4)	(0.3,0.1,0.3)
E4	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.1,0.3,0.5)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.9,0.5,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.1,0.3,0.5)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.5,0.8,0.9)	(0.9,1.0,1.0)	(0.6,0.8,0.9)	(0.4,0.6,0.9)	(0.1,0.3,0.5)
E5	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.2,0.7,0.9)	(0.7,0.9,1.0)	(0.5,0.9,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.3,0.5,0.7)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.1,0.3,0.5)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.1,0.3,0.5)	(0.7,0.9,1.0)	(0.3,0.5,0.7)	(0.0,0.0,0.1)	(0.0,0.0,0.1)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.2,0.5,0.7)	(0.7,0.9,1.0)	(0.4,0.7,0.9)	(0.0,0.2,0.4)	(0.1,0.2,0.3)
E6	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.5,0.7,0.9)	(0.7,0.9,1.0)	(0.5,0.7,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.1,0.3,0.5)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.1,0.3,0.5)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.0,0.0,0.0)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.7)	(0.3,0.5,0.7)	(0.8,1.0,1.0)	(0.5,0.7,0.9)	(0.2,0.2,0.4)	(0.1,0.2,0.3)
E7	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.0,0.0,0.1)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.3,0.5,0.6)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.0,0.0,0.1)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.8)	(0.9,1.0,1.0)	(0.6,0.8,0.9)	(0.5,0.7,0.9)	(0.0,0.0,0.1)
E8	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.7,0.9,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.0,0.0,0.1)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.0,0.0,0.0)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.4,0.6,0.8)	(0.9,1.0,1.0)	(0.6,0.8,0.9)	(0.3,0.5,0.6)	(0.0,0.1,0.2)
E9	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.9,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.3,0.5,0.7)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.1,0.3,0.5)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.0,0.0,0.1)	(0.3,0.5,0.7)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.4,0.6,0.8)	(0.9,1.0,1.0)	(0.5,0.8,0.9)	(0.3,0.5,0.6)	(0.2,0.4,0.6)
E10	A	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.1,0.3,0.5)
	D	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.5,0.7,0.9)	(0.3,0.5,0.7)
	R	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.7,0.9,0.9)	(0.9,1.0,1.0)	(0.5,0.7,0.9)	(0.3,0.5,0.7)	(0.3,0.5,0.7)
	M	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.9,1.0,1.0)	(0.6,0.8,0.9)	(0.9,1.0,1.0)	(0.6,0.8,0.9)	(0.4,0.6,0.9)	(0.2,0.4,0.6)
\tilde{q}_j	(0.90, 1.00, 1.00)	(0.90, 1.00, 1.00)	(0.52, 0.68, 0.80)	(0.37, 0.61, 0.78)	(0.84, 0.97, 1.00)	(0.55, 0.75, 0.91)	(0.30, 0.43, 0.62)	(0.09, 0.24, 0.39)	

TABLE 8. Assessment results at Company-A.

CCCC	W_C	I_C	Level	W_L	I_L	$P_{Success}$
CCCC1	11.0321	0.66271	2	16.64	0.3239	0.6910 Approx 69%
CCCC2	5.6150	0.33729				
CCCC3	8.5184	0.41164	3	20.69	0.402699	
CCCC4	12.1756	0.58836				
CCCC5	3.4215	0.24358	4	14.04	0.273353	
CCCC6	10.6256	0.75642				

TABLE 9. Assessment results at Company-B.

CCCC	W_C	I_C	Level	W_L	I_L	$P_{Success}$
CCCC1	10.600	0.185	2	17.333	0.30267	77.846 Approx 78%
CCCC2	6.733	0.117				
CCCC3	10.200	0.178	3	21.733	0.37951	
CCCC4	11.533	0.201				
CCCC5	5.533	0.096	4	18.200	0.31781	
CCCC6	12.666	0.221				

OSDO industries. These practices are used as input in the weight calculating process. Following are the steps followed in this process.

1) WEIGHT CALCULATION OF EACH PRACTICE

1. These OSDO experts are questioned to give their subjective judgment about the significance of each practice in OSDO activities incorporating linguistic scale presented in table 1.

2. The linguistic evaluations are then transcribed into corresponding TFNs as shown in table 5, while taking critical communication and coordination challenge 2: “Lack of ICT/Technological cohesion” as an example.

3. As the observation of each expert are different due to their role, industrial experience, qualification etc. Equation-3 was used to get the synthesized aggregate TFN as listed in table 11 column 2 (see Appendix B for table 11).

4. Then defuzzification of the TFN was carried out to obtain BNC in a crisp format using equation (4). The outcomes are shown in table 11 column 3 and 4. The BNP value was used for ranking and further calculation as shown in table 11 (see Appendix B for table 11).

5. The crisp number obtained in step 4 was normalized and the normalized importance R_j of practices was obtained by using (5) which were further used to find an overall rank of each practice. The outcomes are presented in table 11 column 8 and 9 (see Appendix B for table 11).

TABLE 10. Revised CCCMM mitigation levels.

CCCMM Levels		Focus	Critical Communication and Coordination Challenges (CCCC)	Practices
S. No	Name			
1	Preliminary	This mitigation level can be best described as one of chaotic processes	Nil	Nil
2	Communication	The vendor has addressed approximately the communication challenges	CCCC1: Lack of Informal/Face-to-Face Communication CCCC2: Lack of ICT/Technological Cohesion	C1P1-C1P14 C2P1-C2P8
3	Familiarization	The vendor has addressed appropriately all the cultural and geographical differences	CCCC3: Cultural Differences CCCC4: Geographical Dispersion	C3P1-C3P13 C4P1-C4P15
4	Coordination	The vendor is coordinating well in all of the outsourcing activities with the clients	CCCC5: Language Differences CCCC6: Lack of Credibility	C5P1-C5P8 C6P1-C6P17

6. We also calculated the weight of each level and each challenge by using R_j across level and challenge.

C. DETERMINING THE SUCCESS POSSIBILITY OF COMMUNICATION AND COORDINATION CHALLENGES MITIGATION CONVERSION/FORMATION

Once we have an importance weight R_j and possible implementation Q_j of practice then it is easy to calculate the possibility of success using (11). The possibility of success for company A is shown in the second last column of table 8. The overall success is equal to the sum of the success of all practices. The success 0.5 indicates a 50% chance of both success and failure. Once we get value for the possibility of success then the possibility of failure can be calculated using (12).

D. ASSESSMENT BASED ON THE MOTOROLA ASSESSMENT TOOL AND MODEL LEVELS

In order to find the possible mitigation level, and weak area for further improvements, the implementation score I_C for each critical communication and coordination challenge and each level I_L was calculated using (13) and (14) respectively.

$$I_C = \frac{\sum_{j=1}^k Q_j}{Q_L} \tag{13}$$

In (13), $\sum_{j=1}^k Q_j$ represent the BNP weight Q_C of the each individual critical challenge, Q_L is sum of the BNP weight of all practices in that level, k represent the total number of practices in that level.

I_C = sum of the implementation score of all practices for that critical challenge (Q_C) / Sum of the implementation score of that level (W_L).

$$I_L = \frac{Q_L}{\sum_{j=1}^k Q_j} \tag{14}$$

Q_L = W_L / sum of implementation of all practices/ solution (14)

V. RESULTS, ASSESSMENTS AND RECOMMENDATIONS

The importance weight and possible ranking of 75 practices for 6 critical communication and coordination challenges faced to OSDO vendor organizations in connection to CCCM formation are given in table 11 (see Appendix B) and

TABLE 11. Importance weight and possible ranking of the practices.

Practices #	Wj=(l, m, u)			BNP_WJ	Rj	Over All Rank	R _L	Rank In Level	R _C	Rank In CSF
C1P1	0.87	0.98	1.00	0.950	0.014104	11	0.04736	3	0.0748	1
C1P2	0.83	0.92	0.98	0.913	0.013562	39	0.04554	14	0.0720	8
C1P3	0.87	0.98	1.00	0.948	0.014069	13	0.04724	4	0.0747	2
C1P4	0.82	0.94	0.99	0.917	0.013621	30	0.04573	10	0.0723	6
C1P5	0.84	0.97	1.00	0.936	0.013892	19	0.04664	7	0.0737	4
C1P6	0.84	0.97	1.00	0.937	0.013904	17	0.04668	5	0.0738	3
C1P7	0.78	0.91	0.98	0.888	0.013185	45	0.04427	16	0.0700	10
C1P8	0.82	0.94	0.99	0.917	0.013609	32	0.04569	11	0.0722	7
C1P9	0.81	0.94	0.98	0.912	0.013539	41	0.04546	15	0.0718	9
C1P10	0.75	0.89	0.96	0.867	0.012867	57	0.04320	19	0.0683	12
C1P11	0.72	0.89	0.98	0.863	0.012820	60	0.04304	21	0.0680	13
C1P12	0.81	0.95	1.00	0.918	0.013633	29	0.04577	9	0.0723	5
C1P13	0.70	0.92	0.98	0.867	0.012879	56	0.04324	18	0.0683	11
C1P14	0.72	0.88	0.97	0.860	0.012761	62	0.04285	22	0.0677	14
C2P1	0.90	1.00	1.00	0.966	0.014340	3	0.04815	1	0.1311	1
C2P2	0.84	0.97	1.00	0.935	0.013880	20	0.04660	8	0.1269	4
C2P3	0.81	0.95	0.99	0.915	0.013586	34	0.04561	12	0.1242	5
C2P4	0.74	0.89	0.96	0.865	0.012843	59	0.04312	20	0.1174	8
C2P5	0.88	0.99	1.00	0.956	0.014187	7	0.04763	2	0.1297	2
C2P6	0.84	0.97	1.00	0.937	0.013904	18	0.04668	6	0.1271	3
C2P7	0.76	0.90	0.98	0.881	0.013079	49	0.04391	17	0.1196	7
C2P8	0.81	0.94	0.99	0.914	0.013574	37	0.04558	13	0.1241	6
C3P1	0.89	0.99	1.00	0.959	0.014234	6	0.03806	4	0.0819	2
C3P2	0.87	0.98	1.00	0.951	0.014116	9	0.03775	6	0.0812	3
C3P3	0.72	0.89	0.98	0.861	0.012784	61	0.03419	22	0.0735	11
C3P4	0.87	0.98	1.00	0.950	0.014104	12	0.03772	8	0.0811	5
C3P5	0.87	0.98	1.00	0.951	0.014116	10	0.03775	7	0.0812	4
C3P6	0.83	0.96	1.00	0.932	0.013833	21	0.03699	10	0.0796	6
C3P7	0.73	0.91	1.00	0.881	0.013079	48	0.03497	17	0.0752	8
C3P8	0.65	0.84	0.96	0.816	0.012113	69	0.03239	26	0.0697	12
C3P9	0.67	0.82	0.94	0.810	0.012019	73	0.03214	28	0.0691	13
C3P10	0.89	0.99	1.00	0.960	0.014257	5	0.03813	3	0.0820	1
C3P11	0.74	0.91	0.99	0.879	0.013055	52	0.03491	18	0.0751	9
C3P12	0.77	0.91	0.97	0.883	0.013103	46	0.03504	16	0.0754	7
C3P13	0.76	0.90	0.97	0.878	0.013032	54	0.03485	20	0.0750	10
C4P1	0.86	0.98	1.00	0.947	0.014057	14	0.03759	9	0.0702	4
C4P2	0.84	0.96	1.00	0.931	0.013821	24	0.03696	12	0.0691	6
C4P3	0.77	0.90	0.97	0.878	0.013032	53	0.03485	19	0.0651	10
C4P4	0.74	0.90	0.99	0.875	0.012985	55	0.03472	21	0.0649	11
C4P5	0.80	0.95	1.00	0.917	0.013609	33	0.03639	14	0.0680	7
C4P6	0.83	0.96	1.00	0.932	0.013833	22	0.03699	11	0.0691	5
C4P7	0.90	1.00	1.00	0.966	0.014340	4	0.03835	2	0.0717	2
C4P8	0.88	0.99	1.00	0.956	0.014187	8	0.03794	5	0.0709	3
C4P9	0.67	0.83	0.95	0.816	0.012113	68	0.03239	25	0.0605	14
C4P10	0.68	0.83	0.93	0.813	0.012077	70	0.03230	27	0.0604	15
C4P11	0.90	1.00	1.00	0.967	0.014352	1	0.03838	1	0.0717	1
C4P12	0.69	0.85	0.95	0.831	0.012337	64	0.03299	24	0.0616	13
C4P13	0.78	0.92	0.98	0.896	0.013303	44	0.03557	15	0.0665	9
C4P14	0.81	0.95	0.99	0.917	0.013609	31	0.03639	13	0.0680	8
C4P15	0.70	0.86	0.96	0.839	0.012454	63	0.03330	23	0.0622	12
C5P1	0.86	0.98	1.00	0.946	0.014045	15	0.04279	4	0.1338	1
C5P2	0.83	0.96	1.00	0.929	0.013786	27	0.04200	6	0.1313	4
C5P3	0.83	0.96	1.00	0.932	0.013833	23	0.04215	22	0.1318	3
C5P4	0.72	0.87	0.90	0.829	0.012313	66	0.03752	8	0.1173	6
C5P5	0.65	0.82	0.95	0.806	0.011971	74	0.03647	7	0.1141	8
C5P6	0.89	0.93	1.00	0.937	0.013916	16	0.04240	10	0.1326	2
C5P7	0.77	0.89	0.95	0.866	0.012855	58	0.03917	17	0.1225	5
C5P8	0.67	0.85	0.96	0.825	0.012242	67	0.03730	26	0.1166	7
C6P1	0.84	0.96	0.99	0.931	0.013821	25	0.04211	2	0.1317	2
C6P2	0.81	0.94	0.99	0.913	0.013562	40	0.04132	7	0.1292	5
C6P3	0.81	0.94	0.99	0.914	0.013574	36	0.04136	4	0.1293	4
C6P4	0.90	1.00	1.00	0.967	0.014352	2	0.04373	20	0.1367	1
C6P5	0.83	0.95	0.99	0.925	0.013739	28	0.04186	24	0.1309	3

TABLE 11. (Continued.) Importance weight and possible ranking of the practices.

C6P6	0.81	0.94	0.99	0.913	0.013562	38	0.04132	3	0.0607	8
C6P7	0.81	0.94	0.99	0.915	0.013586	35	0.04139	18	0.0609	7
C6P8	0.79	0.94	0.99	0.907	0.013468	43	0.04103	21	0.0603	10
C6P9	0.76	0.91	0.98	0.881	0.013079	47	0.03985	5	0.0586	11
C6P10	0.69	0.83	0.91	0.810	0.012030	71	0.03665	12	0.0539	15
C6P11	0.78	0.90	0.96	0.879	0.013055	51	0.03978	10	0.0585	13
C6P12	0.65	0.83	0.95	0.810	0.012030	72	0.03665	1	0.0539	16
C6P13	0.83	0.96	1.00	0.930	0.013810	26	0.04208	8	0.0619	6
C6P14	0.80	0.94	0.99	0.910	0.013503	42	0.04114	11	0.0605	9
C7P15	0.69	0.85	0.96	0.831	0.012337	65	0.03759	9	0.0553	14
C7P16	0.55	0.73	0.88	0.719	0.010675	75	0.03253	14	0.0478	17
C6P17	0.74	0.91	0.99	0.880	0.013067	50	0.03981	15	0.0585	12
BNP_WJ				67.356						

table 6 respectively. In our findings C6P4, C4P11, C2P1, C4P7, C3P10, C3P1 and C2P5 are the most cited practices with respect to the overall weight of importance. The OSDO vendor organizations need to follow the following practices for successful communication and coordination relationship with their clients:

1. C6P4: Improve personal relationship with clients
2. C4P11: Assign technical lead to each site that would be responsible to coordinate process, development and schedule activities
3. C2P1: Adopt Different Latest Technologies such as: Teleconferencing, Videoconferencing, etc.
4. C4P7: Encourage both asynchronous and synchronous communication
5. C3P10: Appoint strong leadership for each team
6. C3P1: Establish open communication between stakeholders through face to face meetings, instant messaging and onsite visits
7. C2P5: Arrange Knowledge Sharing Activities between team members

We have examined that in Level two “Communication” C2P1, C2P5, C1P1, C1P3 and C1P6 are the most cited practices. In order to successfully achieve this level, OSDO vendor organization needs to follow the following practices:

1. C2P1: Adopt Different Latest Technologies such as: Teleconferencing, Videoconferencing, etc.
2. C2P5: Arrange Knowledge Sharing Activities between team members
3. C1P1: Adopt appropriate communication tools like videoconferencing, Teleconferencing, Data Conferencing and Web-Based Technologies
4. C1P3: Daily exchange of the project status by technologies such as, telephone calls, video conferences or emails etc
5. C1P6: Create team having technical skills and cultural awareness

Similarly, we have observed that in order to achieve successful implementation of Level 3 “Proximity”, OSDO vendor organization needs to follow the following top most practices in this level:

1. C4P11: Improve personal relationship with clients
2. C4P7: Encourage both asynchronous and synchronous communication

3. C3P10: Appoint leaders with strong leadership qualities
4. C3P1: Establish open communication between stakeholders through face to face meetings, instant messaging and onsite visits

5. C4P8: Establish communication guidelines, technical infrastructure for information and communication, for example, effective tools and work environments.

Concerning the last Level “Coordination”, the top four practices are:

1. C6P6: Promote informal meetings
2. C6P1: Invest in building and maintaining trust and good relations
3. C6P13: Travel to client location for establishing friendly ties
4. C6P5: Promote efficient outsourcing relationship

A. ASSESSMENT RESULTS AT COMPANY-A

Company-A was ISO 9001:2008 and CMMI Level 2 certified, located in Islamabad, Pakistan. It is an acknowledged leader in global consulting, IT services and business technology that provides offshore software services, web application development, and technical resource outsourcing at affordable costs. They offer strategy consulting in software solutions and the implementation of project development plans for customer’s and holds excellent domain competencies in verticals such as Automotive, Healthcare, Manufacturing, Telecom-Infrastructure-Media-Entertainment and E-Governance, all of which make the company a market leader. The company also offers a range of expertise that aims to help customers re-engineer and re-invent their businesses to successfully compete in an ever-changing marketplace.

The company’s network spans six countries across six continents. Nearly 60+ dedicated and highly skilled IT professionals work in the company’s development center in Pakistan and serve more than 150+ companies globally. They have a strategic business technology and marketing alliance with Microsoft that provides end-to-end services to their clients.

For the assessment, we have considered critical communication and coordination challenges and the rating of practices Q_j is used as input. Following the guidelines of Motorola Assessment Tool in our fuzzy multi-attribute decision-making based assessment framework, an average

TABLE 12. Implementation score and possibility success of the practices.

Practices #	$\tilde{q}_j=(l\tilde{q}_j, m\tilde{q}_j, u\tilde{q}_j)$			Qj	Rank	Rj	Rank	Success P= Rj × Qj	Rank
C1P1	0.74	17	17	17	17	17	17	17	17
C1P2	0.90	10	10	10	10	10	10	10	10
C1P3	0.90	3	3	3	3	3	3	3	3
C1P4	0.47	43	43	43	43	43	43	43	43
C1P5	0.72	24	24	24	24	24	24	24	24
C1P6	0.47	45	45	45	45	45	45	45	45
C1P7	0.65	32	32	32	32	32	32	32	32
C1P8	0.75	23	23	23	23	23	23	23	23
C1P9	0.49	44	44	44	44	44	44	44	44
C1P10	0.90	16	16	16	16	16	16	16	16
C1P11	0.15	65	65	65	65	65	65	65	65
C1P12	0.71	27	27	27	27	27	27	27	27
C1P13	0.61	40	40	40	40	40	40	40	40
C1P14	0.53	47	47	47	47	47	47	47	47
C2P1	0.90	1	1	1	1	1	1	1	1
C2P2	0.90	5	5	5	5	5	5	5	5
C2P3	0.50	48	48	48	48	48	48	48	48
C2P4	0.37	56	56	56	56	56	56	56	56
C2P5	0.83	9	9	9	9	9	9	9	9
C2P6	0.54	36	36	36	36	36	36	36	36
C2P7	0.27	58	58	58	58	58	58	58	58
C2P8	0.09	68	68	68	68	68	68	68	68
C3P1	0.90	2	2	2	2	2	2	2	2
C3P2	0.31	55	55	55	55	55	55	55	55
C3P3	0.23	63	63	63	63	63	63	63	63
C3P4	0.09	67	67	67	67	67	67	67	67
C3P5	0.53	34	34	34	34	34	34	34	34
C3P6	0.53	41	41	41	41	41	41	41	41
C3P7	0.70	31	31	31	31	31	31	31	31
C3P8	0.67	39	39	39	39	39	39	39	39
C3P9	0.23	64	64	64	64	64	64	64	64
C3P10	0.09	66	66	66	66	66	66	66	66
C3P11	0.85	20	20	20	20	20	20	20	20
C3P12	0.65	33	33	33	33	33	33	33	33
C3P13	0.85	22	22	22	22	22	22	22	22
C4P1	0.90	4	4	4	4	4	4	4	4
C4P2	0.90	6	6	6	6	6	6	6	6
C4P3	0.84	21	21	21	21	21	21	21	21
C4P4	0.78	28	28	28	28	28	28	28	28
C4P5	0.64	30	30	30	30	30	30	30	30
C4P6	0.70	26	26	26	26	26	26	26	26
C4P7	0.75	14	14	14	14	14	14	14	14
C4P8	0.70	19	19	19	19	19	19	19	19
C4P9	0.56	49	49	49	49	49	49	49	49
C4P10	0.70	35	35	35	35	35	35	35	35
C4P11	0.72	18	18	18	18	18	18	18	18
C4P12	0.49	54	54	54	54	54	54	54	54
C4P13	0.47	52	52	52	52	52	52	52	52
C4P14	0.27	60	60	60	60	60	60	60	60
C4P15	0.53	50	50	50	50	50	50	50	50
C5P1	0.27	59	59	59	59	59	59	59	59
C5P2	0.77	15	15	15	15	15	15	15	15
C5P3	0.84	12	12	12	12	12	12	12	12
C5P4	0.00	72	72	72	72	72	72	72	72
C5P5	0.02	71	71	71	71	71	71	71	71
C5P6	0.04	69	69	69	69	69	69	69	69
C5P7	0.75	29	29	29	29	29	29	29	29
C5P8	0.00	74	74	74	74	74	74	74	74
C6P1	0.85	11	11	11	11	11	11	11	11
C6P2	0.41	53	53	53	53	53	53	53	53
C6P3	0.04	70	70	70	70	70	70	70	70
C6P4	0.83	7	7	7	7	7	7	7	7
C6P5	0.90	8	8	8	8	8	8	8	8

TABLE 12. (Continued.) Implementation score and possibility success of the practices.

C6P6	0.47	46	46	46	46	46	46	46	46
C6P7	0.49	42	42	42	42	42	42	42	42
C6P8	0.75	25	25	25	25	25	25	25	25
C6P9	0.00	73	73	73	73	73	73	73	73
C6P10	0.39	57	57	57	57	57	57	57	57
C6P11	0.44	51	51	51	51	51	51	51	51
C6P12	0.66	38	38	38	38	38	38	38	38
C6P13	0.85	13	13	13	13	13	13	13	13
C6P14	0.56	37	37	37	37	37	37	37	37
C7P15	0.25	62	62	62	62	62	62	62	62
C7P16	0.00	75	75	75	75	75	75	75	75
C6P17	0.27	61	61	61	61	61	61	61	61
Possibility of success							0.69102		
Possibility of failure							0.30898		

score of 0.7 or above for each critical challenge will show that the specific critical challenge have been successfully implemented. Any critical challenge with an average score that falls below 7 will be considered weak. For a company to achieve any CCCMM level they need to implement all the cited critical challenges in that level. For example a company to get level 2 of CCCMM, their implementation score of “Lack of Informal/Face-to-face meeting” and “Lack of ICT/Technological Cohesion” must be ≥ 0.7 . We use the similar criteria for the practices rating score, such as a practice has an average score of 0.7 or above will considered that a practice has been successfully implemented and below 7 will be considered as weak.

Our assessment results (table 8) do not recommended Company-A for successful implementation of level-2 of CCCMM because the success rate is less than 70% i.e. 69%. Table 8 shows that none of the level is implemented, so Company-A stands at level 1.

B. ASSESSMENT RESULTS AT COMPANY-B

The second company is also a software developing company located in Islamabad, Pakistan. It is a small sized company with about forty employees that provides the following services to clients:

- Android Development;
- I-phone Development;
- Brand Design;
- Work to synchronize and ensure quality Architecture, Design, Development, Testing and Deployment;
- Understand Apple’s likes and dislikes;
- Ensure proper requirements for high-level discussions on application concepts with a client’s team;
- Create Apps that do not consume bandwidth and provide long-term value to customers;
- Ensure an application’s ease of adaptability on iPhone 4, iPhone 4S, iPhone 5, iPhone 5s and all future iPhone versions;
- Understand every feature of iPhone such as Gyroscope, Accelerometer, GPS, touch screen, screen size, cameras, sensors, battery life, etc.
- Help iPhone application developers understand the iOS operating system and its development kit (iOS SDK);

- Create applications considering end-user satisfaction (User friendliness, ease of installation, operation and entertainment);
- Ensure documentation and authentication of standards that meet Apple’s validation criteria;
- Ensure that an application is tested in both development and real-time venues before release on the Apple iStore Enterprise and on schedule.

Table 9 shows the assessment results at Company-B. We have observed that this company has implemented all the critical challenges of the level-2 only; therefore Company-B is at level-2 success of the proposed assessment model.

C. MODIFICATION IN THE STRUCTURE OF CCCMM

In reviewing evaluation results from both case studies (see: tables 8 & 9), we noted the need to modify the CCCMM structure. We thus moved ‘Language Difference’ from the Level-3 to Level-4 ‘Coordination’, as both companies had not fully addressed the ‘Language Differences’ challenge, indicating that remediation of this challenge proved difficult for them. We also changed the name of Level-3 from ‘Proximity’ (preliminary structure) to ‘Familiarization’ (revised structure), as shown in table 10.

VI. LIMITATIONS OF THE STUDY

The limitations of the study to criticize this research work is related to giving case specific empirical implication besides generalized one. In this paper, we have taken OSDO relationship as empirical case; however, the decision support framework based on multi-attribute assessment can be adopted for any MADM problems related to any field. Additionally, we have generalized the framework development methodology to such an extent that other researchers can easily adopt the proposed assessment model procedure and methodology for developing framework for their organization process improvements.

External validity focuses on overall outcomes in all domains. Here, our undeniable deficit is the partial figure of foreign contestants. Out of forty-two respondents only six were from abroad. We did prefer the inclusion of more foreign OSDO experts but due to scarce resources and time constraints it was not possible. Hence, this limitation thwarts any

TABLE 13. List of practices for critical communication and coordination challenges faced to OSDO vendor organizations.

S. No	Code	Name
1.	C1P1	Adopt appropriate communication tools like videoconferencing, Teleconferencing, Data Conferencing and Web-Based Technologies
2.	C1P2	Encourage frequent communication through latest technologies
3.	C1P3	Daily exchange of the project status by technologies such as, telephone calls, video conferences or emails etc
4.	C1P4	Create a Communication Protocol
5.	C1P5	Increase frequency of communication between team members
6.	C1P6	Create team having technical skills and cultural awareness
7.	C1P7	Establish cooperation by to one member from each team. This might possibly solve some of the communication decencies, e.g., when decisions are made at informal meetings.
8.	C1P8	Arrange conferences/workshops for distributed team members
9.	C1P9	Build trustworthy relationship
10.	C1P10	Sponsor team members for site visits
11.	C1P11	Create a database that contains the areas of expertise of the individual project participants
12.	C1P12	Arrange weekly conference calls by the central team or the remote team(s) to talk about the status of the project and clarify questions, or they take place at dates specified in the project plan, usually to discuss deliverables
13.	C1P13	Use Distributed Agile models e.g. SCRUM
14.	C1P14	Use of tools such as 'Trusty' to support software development process
15.	C2P1	Adopt Different Latest Technologies such as: Teleconferencing , Videoconferencing, etc.
16.	C2P2	Adopt both Asynchronous (text) and Synchronous (voice) tools
17.	C2P3	Arrange ICT Training Sessions for the team members
18.	C2P4	Use of Web Technologies for Collaboration e.g. Web-based tutoring, web-based mentoring, web-based knowledge mining and web-based knowledge profiling
19.	C2P5	Arrange Knowledge Sharing Activities between team members
20.	C2P6	Arrange social events for awareness between team members
21.	C2P7	Build Communication Protocol
22.	C2P8	Adopt Distributed Agile Models such as Distributed pair programming and Urgent request
23.	C3P1	Establish open communication between stakeholders through face to face meetings, instant messaging and onsite visits
24.	C3P2	Use of online tools for online team-building if visits won't work
25.	C3P3	Arrange training and workshops to understand both client organization and people culture involved in OSDO
26.	C3P4	Define a cultural ambassador for the project to create teams with complementary skills and cultures
27.	C3P5	Create close cooperation between team members involved at both client and vendor side to built trust-worthy relationship
28.	C3P6	Build mixed teams with memberships from different cultural backgrounds.
29.	C3P7	Create roles, relationships and rules to facilitate coordination and control over geographical, temporal and cultural distance
30.	C3P8	Increase project members' domain knowledge and reduce cultural distance by using Agile Methods
31.	C3P9	Introduce a neutral third-party Agile coach
32.	C3P10	Appoint strong leadership for each team
33.	C3P11	Make visible the work progress for all stakeholders
34.	C3P12	knowledge of the client's language and culture
35.	C3P13	Take equality and justice approach in management activities.
36.	C4P1	Use of technology to make knowledge sharing easier between the teams. Such as, webcams and instant messaging software to improve communication and coordination between the team members distributed across multiple sites
37.	C4P2	Synchronous communication, such as face-to-face meetings, online chats, teleconferences, and web conferences, is ideal for quick status meetings, brainstorming sessions, and reviews. Asynchronous communication, such as email, discussion forums, and shared documents, provides a persistent record of discussions and decisions, and don't require participants to be available at the same time
38.	C4P3	Shifting the working hours of both the onshore and offshore teams, by adjusting direct meetings to the time zones or by creating asynchronous meetings via project managers.
39.	C4P4	Communicate with clients timely
40.	C4P5	Negotiate teams working hours for Synchronicity
41.	C4P6	Create a team calendar aiding in project planning
42.	C4P7	Encourage both asynchronous and synchronous communication
43.	C4P8	Establish communication guidelines, technical infrastructure for information and communication, for example, effective tools and work environments
44.	C4P9	Provides opportunities for synchronous interactions without prior schedule definition
45.	C4P10	Be online or stay connected
46.	C4P11	Assign technical lead to each site that would be responsible to coordinate process, development and schedule activities
47.	C4P12	Create bridging team
48.	C4P13	Create roles, relationships and rules to facilitate coordination and control over geographical, temporal and cultural distance
49.	C4P14	Promote visits and exchanges among sites
50.	C4P15	Utilize the global distribution to conduct tasks "over night", e.g. the test of new components so that the results are available on the following morning
51.	C5P1	Use of communication media to support a sense of co-located and synchronous interaction by employing facial expressions, body language, and speech

TABLE 13. (Continued.) List of practices for critical communication and coordination challenges faced to OSDO vendor organizations.

52.	C5P2	Understand the language and business culture of clients
53.	C5P3	Encourage face-to-face meetings
54.	C5P4	Select a vendor with knowledge of the client's language
55.	C5P5	Review project document by a native speaker
56.	C5P6	Encourage team members to use standard language/common language in order to avoid miss-interpretation
57.	C5P7	Appoint team members having fluency in English language
58.	C5P8	Appoint language translation
59.	C6P1	Investing in building and maintaining trust and good relations
60.	C6P2	Arrange frequent meetings in various forms such as video conferencing, personnel rotations, and team building exercises
61.	C6P3	Improve vendor's capability such as technical, managerial, and staffing capabilities as this play a cardinal role in maintaining a client's trust in an ongoing business relationship.
62.	C6P4	Improve personal relationship with clients
63.	C6P5	Promote efficient outsourcing relationship
64.	C6P6	Promote informal meetings
65.	C6P7	Effective and frequent communication between clients and vendors at all levels of the organizational hierarchy are pivotal for managing trust
66.	C6P8	Build efficient a contract and Conform to the contract and quality of deliverables
67.	C6P9	Spending resources on reducing socio-cultural distance by means of facilitating face-to-face meetings.
68.	C6P10	Implement the contract successfully is it was signed without cost overrun etc.
69.	C6P11	Have at least some people at each node who have met people at peer nodes in person. This also reduces the perceived geographical distance, if not the physical. This helps promote trust and reduce fear
70.	C6P12	Early and frequent delivery of working software
71.	C6P13	Travel to client location for establishing friendly ties
72.	C6P14	Use status (every three weeks) to signal transparency
73.	C7P15	Run series of workshops
74.	C7P16	Using Scrum practices in GSD improved communication, trust, motivation and product
75.	C6P17	Use Trusty, a tool which was designed to support the distributed software development process

generalization of the study's results. However, we are fully confident that our findings complement outcomes reported in our previously published SLRs [4], [46], [49], especially as there were no major differences between our SLR findings and empirical results [68]. Therefore, the present work may help to bridge the gap between academicians/researchers and industry practitioners regarding the context of software outsourcing. Moreover, our empirical study and those of other researchers followed much the same approach [23], [57], [69].

VII. CONCLUSION AND FUTURE WORK

In order to answer RQ1 and RQ2, we have conducted SLRs [4], [46] and empirical study [70]. We identified through SLR₁ seventeen communication and coordination challenges faced to OSDO vendor organizations [4], [46]. In these challenges six were consider critical. We have found 75 practices (see Appendix A) through SLR₂ for these critical challenges and validated it through a questionnaire survey in OSDO industries. To answer RQ3, this study developed a framework model (CCCMM) based on CMMI and FMADM approach for forecasting the possibility of successful OSDO relationship. A similar approach has been used by other researchers [1].

The proposed model has two main parts such as; weighting or ranking, and assessment or rating. Due to the independent nature of the two parts, each part can be utilized individually. The ranking part of the proposed framework might be used as a ranking mechanism for critical communication and coordination challenges faced to OSDO vendor organizations. While the assessment part of the framework can be

utilized as an assessment tool for the assessment of OSDO vendor organizations. The ranking part is demonstrated with the help of empirical survey while the assessment part of the framework is demonstrated by conducting case studies in the OSDO organizations. Collectively, it can be used as a decision support system.

To answer RQ4, the results show that our assessment framework is easy to understand, easy to use and can effectively judge the strengths and weakness of software outsourcing communication and coordination processes. Consequently, companies, organizations and enterprises can make use of this framework in order to improve their decision-making and take appropriate corrective actions as suggested by the framework model to avoid any loss in the form of resources and time.

Our proposed framework is currently implemented in the form of a spreadsheet, which can process data received through Google form.

In future, we plan to enhance the CCCMM in the form of a software tool to improve its usability for OSDO vendors. This tool will perform the following different activities and will generate different assessment reports for the OSDO vendors:

- Providing the results of assessment of each critical communication and coordination challenges and also for practices to address these challenges.
- Identifying status of the challenges i.e. weak and strong.
- Providing the mitigation level of the outsourcing organization.
- This tool will also guide the OSDO practitioners in successfully assessing the organization's mitigation

TABLE 14. Corresponding weights of the practices in empirical survey given by 42 experts.

Practices	E1			E2			E3			E4			E5			E6			E7		
	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U
C1P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P3	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P4	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C1P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P7	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P8	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P10	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P12	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P13	0.5	0.7	0.9	0.3	0.5	0.7	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C1P14	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C2P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P3	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P4	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C2P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P6	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P7	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C2P8	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P3	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C3P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P6	0.5	0.7	0.9	0.9	1.0	1.0	0.7	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P7	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9
C3P9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P10	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P11	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P12	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C3P13	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P1	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P3	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C4P4	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C4P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P6	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9
C4P10	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P12	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C4P13	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C4P14	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P15	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C5P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P2	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C5P3	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P5	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C5P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P7	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.1	0.3	0.5	0.9	1.0	1.0	0.9	1.0	1.0
C5P8	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C6P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P3	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.5	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0

TABLE 14. (Continued.) Corresponding weights of the practices in empirical survey given by 42 experts.

C6P7	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C6P8	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C6P9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P10	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P11	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0
C6P12	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C6P13	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P14	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C6P15	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C6P16	0.3	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.3	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9
C6P17	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
Practices	E8			E9			E10			E11			E12			E13			E14		
	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U
C1P1	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P2	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.7	0.9	0.9	0.9	1.0	0.9	0.9	1.0
C1P3	0.7	0.9	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P4	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C1P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P7	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C1P8	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C1P9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C1P10	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P11	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.7	0.9	1.0
C1P12	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C1P13	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P14	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9
C2P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C2P3	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C2P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P6	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P7	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C2P8	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P3	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C3P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P7	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P8	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9
C3P9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9
C3P10	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P11	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P12	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P13	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P1	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P2	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P3	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C4P4	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C4P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P6	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9
C4P10	0.3	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.3	0.5	0.7	0.5	0.7	0.9	0.3	0.5	0.7
C4P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P12	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C4P13	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C4P14	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.9	1.0	1.0	1.0	1.0	0.9	1.0	1.0
C4P15	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C5P1	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P2	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P3	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0

TABLE 14. (Continued.) Corresponding weights of the practices in empirical survey given by 42 experts.

C5P5	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C5P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P7	0.9	1.0	1.0	0.3	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P8	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C6P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P3	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P7	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P8	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C6P9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P10	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P11	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P12	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0
C6P13	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P14	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C6P15	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C6P16	0.3	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.3	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9
C6P17	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
Practices	E15			E16			E17			E18			E19			E20			E21		
	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U
C1P1	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P2	0.7	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P3	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P4	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P6	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P7	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P8	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P10	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P11	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P12	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P13	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P14	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P3	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C2P4	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P5	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P6	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P7	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C2P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P3	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P7	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P8	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P9	0.5	0.7	0.9	0.7	0.9	1.0	0.3	0.5	0.7	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P10	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P11	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P12	0.7	0.9	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P13	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0
C4P1	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P3	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P4	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C4P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P6	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P9	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P10	0.3	0.5	0.7	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0

TABLE 14. (Continued.) Corresponding weights of the practices in empirical survey given by 42 experts.

C4P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P12	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P13	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P14	0.9	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0
C4P15	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P1	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P2	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P3	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P4	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C5P5	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C5P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.1	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P7	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P8	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P1	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P3	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P5	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P6	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P7	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P8	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P10	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0
C6P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P12	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P13	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P14	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P15	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P16	0.3	0.5	0.7	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0
C6P17	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
Practices	E22			E23			E24			E25			E26			E27			E28		
	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U
C1P1	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P2	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.7	0.9	0.7	0.9	1.0
C1P3	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	0.9
C1P4	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0
C1P5	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P6	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P7	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0
C1P8	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P9	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P10	0.9	1.0	1.0	0.5	0.7	0.9	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.3	0.5	0.7	0.5	0.7	0.9
C1P11	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C1P12	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C1P13	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P14	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0
C2P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P2	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C2P3	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0
C2P4	0.9	1.0	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.9	1.0	1.0
C2P5	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P6	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C2P7	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0
C2P8	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P1	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P2	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P3	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0
C3P4	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P5	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P6	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P7	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P8	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9
C3P9	0.7	0.9	1.0	0.5	0.7	0.9	0.3	0.5	0.7	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0
C3P10	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P11	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0
C3P12	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P13	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0
C4P1	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0

TABLE 14. (Continued.) Corresponding weights of the practices in empirical survey given by 42 experts.

C3P6	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C3P7	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P8	0.7	0.9	1.0	0.5	0.5	0.7	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C3P9	0.7	0.9	1.0	0.5	0.5	0.7	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P10	0.9	1.0	1.0	0.9	1.0	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P11	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P12	0.9	1.0	1.0	0.9	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P13	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9
C4P1	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P2	0.9	1.0	1.0	0.9	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.7	0.9
C4P3	0.9	1.0	1.0	0.5	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C4P4	0.9	1.0	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C4P5	0.9	1.0	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P6	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P7	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P8	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P9	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7
C4P10	0.5	0.7	0.9	0.5	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0
C4P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P12	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.3	0.5	0.7
C4P13	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P14	0.7	0.9	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P15	0.5	0.7	0.9	0.5	0.5	0.7	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0
C5P1	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P2	0.9	1.0	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P3	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C5P4	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.3	0.5	0.7	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C5P5	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7
C5P6	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.1	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P7	0.5	0.7	0.9	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P8	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C6P1	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P2	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C6P3	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P5	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C6P6	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P7	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C6P8	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C6P9	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.3	0.5	0.7
C6P10	0.9	1.0	1.0	0.7	0.7	0.9	0.7	0.3	0.5	0.7	1.0	1.0	0.1	0.3	0.5	0.5	0.7	0.9	0.5	0.7	0.9
C6P11	0.5	0.7	0.9	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P12	0.7	0.9	1.0	0.5	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C6P13	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P14	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C6P15	0.7	0.9	1.0	0.5	0.5	0.7	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C6P16	0.5	0.7	0.9	0.5	0.5	0.7	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.3	0.5	0.7
C6P17	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9
Practices	E36			E37			E38			E39			E40			E41			E42		
	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U	L	M	U
C1P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0
C1P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P3	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0
C1P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P5	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P6	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C1P7	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C1P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P9	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P10	0.9	1.0	1.0	0.5	0.7	0.9	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P11	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C1P12	0.7	0.9	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C1P13	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C1P14	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.5	0.7	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C2P3	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P4	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9

TABLE 14. (Continued.) Corresponding weights of the practices in empirical survey given by 42 experts.

C2P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P6	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P7	0.7	0.9	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C2P8	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P2	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P3	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C3P6	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P7	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P8	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P9	0.7	0.9	1.0	0.7	0.3	0.5	0.7	0.5	0.7	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C3P10	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0
C3P11	0.7	0.9	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C3P12	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.3	0.5	0.7
C3P13	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.9	1.0	1.0
C4P1	0.9	1.0	1.0	0.7	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P2	1.0	1.0	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P3	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C4P4	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P5	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P6	0.9	1.0	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P9	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	1.0
C4P10	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P11	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P12	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P13	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C4P14	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C4P15	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P1	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P2	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0
C5P3	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P4	0.3	0.5	0.1	0.7	0.9	1.0	0.5	0.7	0.9	0.3	0.5	0.7	0.7	0.9	1.0	0.5	0.7	0.9	0.3	0.5	0.7
C5P5	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P6	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C5P7	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C5P8	0.9	1.0	1.0	0.3	0.5	0.7	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C6P1	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C6P2	0.7	0.9	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P3	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C6P4	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P5	0.9	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P6	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C6P7	0.7	0.9	1.0	0.7	0.9	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.9	1.0	1.0	0.5	0.7	0.9
C6P8	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P9	0.7	0.9	1.0	0.7	0.9	1.0	0.3	0.5	0.7	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.3	0.5	0.7
C6P10	0.9	1.0	1.0	0.7	0.9	1.0	0.1	0.3	0.5	0.1	0.3	0.5	0.3	0.5	0.7	0.9	1.0	1.0	0.5	0.7	0.9
C6P11	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.3	0.5	0.7
C6P12	0.9	1.0	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.7	0.9	1.0	0.5	0.7	0.9
C6P13	0.7	0.9	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P14	0.7	0.9	1.0	0.9	1.0	1.0	0.9	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0
C6P15	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.5	0.7	0.9	0.7	0.9	1.0	0.9	1.0	1.0	0.7	0.9	1.0
C6P16	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.9	1.0	1.0	0.9	1.0	1.0	0.5	0.7	0.9
C6P17	0.7	0.9	1.0	0.7	0.9	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9

level regarding communication and coordination challenges.

- Creating different assessment reports.

APPENDIX A
(DOWNLOAD MEDIA ZIP FILE)

The complete judgment of survey experts and case study evaluation in TFN format can be found in the attached file. For weights of the practices of table 13 (Appendix-D),

see table 14 while for rating of Company-A, see table 15.

APPENDIX B
RANKING OF THE PRACTICES

See Table 11.

APPENDIX C
RATING OF THE PRACTICES

See Table 12.

TABLE 15. (Continued.) Corresponding weights of the practices in case study.

C6P6	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.3	0.5	0.7	0.5	0.7	0.9	0.3	0.5	0.7	0.4	0.6	0.8
C6P7	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.6	0.9	1.0
C6P8	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.8	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0
C6P9	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1
C6P10	0.5	0.7	0.9	0.3	0.5	0.7	0.1	0.3	0.5	0.3	0.5	0.7	0.3	0.5	0.7	0.5	0.7	0.9	0.3	0.5	0.7	0.4	0.6	0.8
C6P11	0.5	0.7	0.9	0.5	0.7	0.9	0.3	0.5	0.7	0.4	0.6	0.8	0.4	0.9	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.6	0.9	1.0
C6P12	0.9	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.6	0.8	0.9	0.5	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.6	0.9	1.0
C6P13	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.9	1.0	1.0	0.7	0.9	1.0	0.7	0.9	1.0	0.8	0.9	1.0
C6P14	0.7	0.9	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.6	0.8	0.9	0.5	1.0	1.0	0.5	0.7	0.9	0.5	0.7	0.9	0.5	0.8	0.9
C6P15	0.5	0.7	0.9	0.0	0.0	1.0	0.0	0.0	1.0	0.2	0.2	1.0	0.1	0.7	0.9	0.3	0.5	0.7	0.3	0.5	0.7	0.2	0.6	0.8
C6P16	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1
C6P17	0.3	0.3	0.5	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.7	0.9	0.5	0.7	0.9	0.3	0.5	0.7	0.3	0.6	0.8

APPENDIX D
LIST OF PRACTICES

See Table 13.

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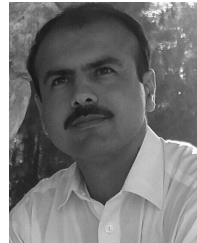
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