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## The Impact of e-HRM: A Classification, Evaluation, and Recommendation

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### Abstract

*In the interim, e-HRM (Electronic Human Resource Management) has become a widespread management practise. e-HRM is clearly based on the belief that it will lead to a variety of benefits, including cost savings, increased efficiency, higher levels of quality control, and even a greater strategic role for human resources inside the company. Research is expected to give a general understanding of the repercussions of e-HRM in order to help practitioners in making decisions. A description model could provide a detailed classification of current and potential consequence concepts, and the corresponding categories could be described, contrasted, and essentially assessed. This should be useful as a starting point for thinking about the concept of consequences. Furthermore, the classification provides general criteria for selecting a conceptualisation in future endeavours, as well as recognising and classifying concepts from previous outcome research. As a result, the focus of this study is on how to properly conceptualise the effects of e-HRM. This may be accomplished by first outlining a classification strategy for consequence notions. A second goal of the work is to find previously unrecognised ideas based on the classification process. e-HRM research and practise are studied in light of this unique notion of repercussions, which has been used in information system capabilities.*

**Keywords:** Electronic HRM; e-HRM Outcomes; Human Resources Information System; HRIS.

### E-İKY'nin Etkisi: Bir Sınıflandırma, Değerlendirme ve Öneri

#### Öz

*Bu süre zarfında, e-HRM (Elektronik İnsan Kaynakları Yönetimi), yaygın bir yönetim uygulaması haline gelmiştir. e-HRM, maliyet tasarrufu, artan verimlilik, daha yüksek kalite kontrol seviyeleri ve hatta şirket içinde İnsan Kaynakları için daha büyük bir stratejik rol dahil olmak üzere çeşitli faydalar sağlayacağı inancına dayanmaktadır. Araştırma kapsamında, uygulayıcıların kararlarını vermede yardımcı olmak amacıyla e-HRM'nin sonuçları üzerinde genel bir anlayış sağlanması beklenmektedir. Bir tanım modeli, mevcut ve potansiyel sonuç kavramlarının ayrıntılı bir sınıflandırmasını sağlayabilir ve ilgili kategorileri tanımlayabilir, karşılaştırabilir ve temelde değerlendirebilir. Bu, sonuçlar kavramını düşünmeye başlama noktası olarak faydalı olmalıdır. Ayrıca, gelecekteki çabalarda bir kavramlaştırma seçerken genel kriterler sağlar ve önceki sonuç araştırmalarından kavramları tanımaya ve sınıflandırmaya yardımcı olur. Bu nedenle, bu çalışmanın odak noktası, e-HRM'nin etkilerinin nasıl uygun bir şekilde kavramlaştırılacağıdır. Bu, sonuç kavramları için bir sınıflandırma stratejisi belirleyerek başarılabileceği gibi, sınıflandırma sürecine dayalı olarak daha önce tanınmamış fikirleri bulmak da çalışmanın ikinci bir amacıdır. Hali hazırda bilgi sistemlerinde kullanılan bu benzersiz sonuç kavramı ışığında e-HRM araştırması ve uygulaması incelenmektedir.*

**Anahtar Kelimeler:** Elektronik İKY, e-İKY Çıktıları, İnsan Kaynakları Bilgi Sistemi, İKBS

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## **Introduction**

Internet advancements in recent years have increased the usage of computerised Human Resource Management systems. To put it another way, e-HRM is the process of utilising information technologies (IS) for both networking and assisting employees as they carry out their day-to-day HR responsibilities (Bondarouk et al., 2017; Marler & Parry, 2016; Shahreki et al., 2019). Human resources consultants' studies show that the number of organisations using e-HRM and the level of its implementation both continue to grow (Myllymaki, 2021; Njoku & Ebie, 2015). E-HRM is now a prevalent practise in many organisations, according to several practitioner reports (Schalk et al., 2013; Shahreki, 2019a; Strohmeier & Kabst, 2014). E-HRM is widely used because many organisations believe it will have a good impact on a variety of aspects of their businesses. Many of these involve cost savings and efficiency gains as well as a more strategic role for HR in the company (Kataoka et al., 2019; Oehlhorn et al., 2020). In general, e-HRM consequences refer to any events that occur as a result of the usage of IS in HRM, whether they are positive or negative. For this reason, research is being asked to explore the real-world effects of e-HRM in order to help practitioners with their various implementation and application options. Research for a long time depended on orthodoxies taken for granted and self-evident to conceptualise the effects of their work.

As a result, the topic of consequences was rarely examined in depth. Bondarouk et al. (2017) and Shahreki et al. (2022a) have both produced empirical results that have been widely criticised for their infamous inconsistency. When it comes to e-effects, HRM's future study should question assumptions rather than just depend on established orthodoxies. As a result, the focus of this study is on how to properly conceptualise the effects of e-HRM. As a first step, a classification framework is presented that allows for the systematic classification of consequence concepts, which builds on and refines prior work. There is also some discussion of the major categories of notion. Secondly, based on the classification, the study seeks to recreate the frequently latent notions in prior research on the repercussions of IS in HRM. There is no intention to do a typical evaluation of the results about the repercussions of e-HRM. A definition of consequences is suggested in the third part, and the implications for e-HRM research and practise are discussed.

## 1. Classification

Various theories on the effects of IS have been developed over the course of more than 50 years of research. Research on the effects of e-HRM can benefit from a general classification of concepts rather than a comprehensive list of all possible concepts. As a result, a classification is derived in this part, and its key categories are then discussed.

### 1.1. Creation of a Classification

Theoretical and conceptual work, as well as more recent discussions of IS consequences, have helped to clarify some of the more fundamental aspects of concepts. As a result, diverse conceptions of consequences may be characterised by their origins, explanations, divergence, dynamic development, (un)predictability, (un)desirability, manageable, and researchable characteristics. As a result, these eight linked characteristics have been briefly presented. First and foremost, the source of repercussions refers to the person or persons responsible for initiating the change. Due to the diversity of opinions, this is an important consideration when classifying ideas. As an illustration, although some theories credit technology as the only source of inspiration, others place greater emphasis on organisational efforts (Hatch, 2018). It's the primary kind of explanation that's intimately related to the purported cause of the phenomena, which is called the explanation of consequences. Some notions are founded on causal explanations, while others are more teleological in nature. A third key issue is whether or whether the notion enables and explains contradictory outcomes, such as cutting costs in one organisation and raising expenses in another. While some conceptions may give basic explanations for such divergences, others are unable to do so and consider diverse results as contradictory and paradoxical in nature. Repercussions can be differentiated based on whether or not they take into account the dynamic change in consequences over time (Hanelt et. al., 2021). In contrast to certain conceptions, others imply long-term implications that are irreversible. As a further distinction, ideas can also be characterised by their ability to acknowledge and explain undesirable outcomes and unexpected outcomes (Hillmann & Guenther, 2021). Even if the repercussions of a notion are fully explained and even predicted, it may still be difficult to understand and explain the undesirable and unforeseen outcomes. In addition, it is important to consider the manageability of outcomes. While some theories hold that the outcomes are predetermined and hence cannot be influenced by managerial actions, other theories hold that managers may, at the very least, have some say in how the outcomes unfold, and as a result, can devise strategies for dealing with undesirable outcomes. Finally, the concept's

researchability in empirical research is referred to as its researchability in consequences. While some concepts allow for simple empirical study approaches, others face considerable challenges.

A key classification potential is apparent from the above-described elements, notably the postulated origin and the accompanying sort of explanation. While there are theories that place the blame squarely on human activity, there are others that place the blame squarely on conventional causes. The opposite extreme is a belief in a teleological explanation in which human choice and subsequent action are seen as the source of all observed effects. There is little doubt that this dichotomous character of conceptions relates to the well-established dichotomy between deterministic and voluntaristic methods in organisational research (De Keyser, 2021). Preceding external events are presumed to be causally determinative in deterministic methods, leading to the conclusion that there is no such thing as free will in human beings. Since people may be self-directed agents, voluntaristic methods emphasise their freedom of choice. Deterministic principles, when applied to the concept of consequences, assert that technological impacts dictate organisations. Decisive techniques presume that technology is solely responsible for all outcomes. Voluntarism, on the other hand, holds that human beings are the ones who actually cause the outcomes. Voluntarism is a word given to perspectives that believe that outcomes are the result of human activity and volition. Here we can see that there are two primary categories of organisational analysis based on these established categories: deterministic and voluntary ideas of consequences. As a result, the perspectives of rigorous determinism and stringent voluntarism are diametrically opposed and hold that the outcomes of events may be attributed solely to technology or to people. Moderate methods, on the other hand, strike a middle ground between the two extremes, combining the best of both worlds. Four basic kinds of notions of consequences emerge when stringent and moderate forms of determinism and voluntarism are distinguished, and they are addressed in relation to the above-described elements.

## **1.2. Debate on Classification**

### **1.2.1. Complete Predeterminism**

In terms of IT ramifications, the earliest and most prominent idea is that of strict technical determinism, which is sometimes known as the "technology is essential" (Brynjolfsson, 1994; Doolin, 1998; Saleh et. al., 2022). Strict determinism, as described above, sees technology as the exclusive source of consequences. A consequence is a direct

result of the information systems used. Consequently, information systems and their repercussions create a chain of causation. According to this view, the only explanation for the occurrence and nature of effects is due to technological advancements. As a result, absolute determinism fails to account for the well-known divergences in outcomes that are inherent to the theory of causality. Consequences that are inconsistent with rigorous determinism must be seen as contradictory and paradoxical. Consequences should also be long-lasting, as they should persist for as long as the underlying cause persists. To put it another way, there should be no dynamic alterations to the outcomes according to rigorous determinism. However, strict determinism is compatible with undesirable implications, such as time-consuming and expensive data management. The repercussions may also be unforeseen by the organisation, especially if this is the first time it has happened. However, the continued application should lead to an understanding of all possible outcomes. No matter how hard we try, we cannot control the outcomes of our actions since they are already set in stone. In the end, organisations must accept the consequences as they are, even if some of them are beneficial and some of them aren't. Last but not least, the simple explanation provided by rigorous determinism is congruent with common sense and allows researchers to conduct empirical studies using technology as a cause and its effects as a consequence. Although this ease of researchability may seem like a benefit, it's not clear if it's worth the effort. Strict determinism should be considered as a simple idea that is experimentally substantially questioned, if it has not already been rejected, given the recurrent and obvious divergences in consequence research (Ashurst et al., 2008; Chege et al., 2020; Heslina & Syahrani, 2021; Lei et al., 2021; Ratna & Kaur, 2016; Sahay & Walsham, 2017).

### **1.2.2. Slight Determinism**

It is possible that moderate determinism, which is also known as the "a contingency plan" (Lai, 2017; Rai & Selnes, 2019; Van Grembergen & De Haes, 2007), is the best way to think about the idea of consequences. According to mild determinism, technological innovation is the primary source of the outcomes that are generated. There are also more dependent elements that may be moderating and interfering with IT's impact, according to the assumption (Dearing & Cox, 2018; Shahzad et al., 2019; Shin et al., 2022; Yoo et al., 2012; Zhang et al., 2022). The explanation presented is still one of causation, but it adds contingent variables to the mono-causal explanation of rigid determinism. A "causal inconsistency" explanation can be used to describe this type of explanation. As the primary driving force behind its creation, mild determinism may accommodate and explain the

emergence of unexpected outcomes. Many subcategories may be identified while discussing the assumed contingent elements, yet at the same time these subcategories can be merged. One of the first subcategories focuses on contextual elements like the size of the organisation, the need for highly-skilled workers or the industry type, among many others (Aliee & Oviesi, 2020; Bresnahan et al., 2002, Brynjolfsson & Hitt, 2000; Hamidi, 2016; Mirsalari, 2021; Orlikowski & Baroudi, 1991; Strong & Volkoff, 2010; Wixom & Todd, 2005). When these aspects are taken into account, IT may have a wide range of effects on people. To offer a simple example, the size of an organisation may have a significant impact on the cost of a project. Some e-recruiting systems can benefit from economies of scale when used in large organisations, but they cannot take advantage of these savings when used in smaller ones, resulting in higher expenses.

An additional category emphasises that technology itself may be responsible for a wide range of outcomes (Bardoel & Drago, 2016; Heslina & Syahrani, 2021; Lei et al., 2021; Oehlhorn et al., 2020; Saradha & Patrick, 2011; Sadeghi et al., 2018). IT is no longer viewed as a single, homogeneous collection of information systems but instead is split down into a variety of subsystems. A range of various systems, each with a different set of outcomes that are determined by a range of different causes, is the core difference between the two. Human use of technology might be classified as the primary contingent component in a third conceivable subcategory. In this case, the causes of consequences are attributed to the specific way in which a system is used. For example, if an employee self-service system is used properly, it can save expenses, however if it is misused, it can raise costs. Because human behaviour is commonly seen as both free and deliberate in this view, it blurs the boundary between moderate determinism and moderate voluntarism. Although there may be certain cases when it is impossible to categorise specific notions in this subcategory, there is a common rule of thumb that a specific notion is either somewhat determined or moderately voluntary if human contributions predominate. Although this third subcategory combines technology and human contributions, it serves as an intermediary between determinism and voluntarism, proving that they are both end ends of a continuum. Moderate determinism can explain unexpected and undesirable outcomes as well as varied outcomes. The type of assumed contingent elements has a significant impact on the manageability of the consequences. It's difficult to change a company's size overnight, but you can modify how poorly information systems are utilised by providing appropriate training. In other words, the ability to control the alleged dependent circumstances has a significant bearing on

whether or not the repercussions can be managed effectively. A moderate deterministic approach to research is more difficult to conduct than a rigorous deterministic one because of the need to examine the extra moderating effects of many dependent circumstances. When several subcategories are taken into account, the moderate determinism gives a more complicated but also more relevant understanding of outcomes.

### **1.2.3. Purely Voluntary**

Peppard (2020) and Baptista et al. (2010) used the term "organisational necessity" to describe a third conceptual category in which individuals or organisations are fully accountable for the outcomes of their actions. In this approach, technology is viewed as fully the result of continuing human action and may thus be intentionally created, integrated and utilised in order to accomplish (nearly) any organisational purpose. Organizational goals and subsequent actions drive the outcomes, which are then mediated by technology. The presented explanation seems to be teleological since it is revealed to be the product of deliberate activity. Simply put, stringent voluntarism provides a clear explanation for how organisations' aims change, and therefore, so does the implementation and application of Information Systems (IS). If you want to decentralise HRM, for example, you'll need an IT strategy that supports that goal, and the same goes for the other way around. In addition, this explains the possibility of dynamic changes in outcomes over time. If the goals of an organisation change, so will the consequences. Strict voluntarism sees IT as a versatile solution, if not a panacea, at this stage. It is impossible to defend any unanticipated or worse, unwanted outcome of IT when strict voluntarism assumes an almost limitless management of repercussions. The first step in doing research is to understand the motivational structures of the study participants and then link them to the creation, execution, application, and the resultant outcomes. As a result, it is expected that the study designs would be rather intricate and thorough. The major flaw of rigorous voluntarism is its naivete about technology. An unduly simplified and optimistic perspective of information technology and its repercussions is presented by pure voluntarism, which is not a universal measure that can generate any desired result.

### **1.2.4. Low Levels of Volunteerism**

In light of the aforementioned issues, a more refined form of voluntarism falls under the category of moderate voluntarism, which falls under the idea of consequences. For the most part, moderate voluntarism still attributes the majority of effects to the decisions and

actions of organisations. In addition, there are a number of other elements at play. Two key subgroups of moderate voluntarism may be defined based on the kind of these components. Both of these subcategories represent the possibility of varying and dynamic outcomes, some of which may be undesirable or unexpected. It's a first sub-category that recognises the importance of interplay between competing interests. The stringent voluntarism of rigorous voluntarism cannot simply impose human purpose since it is sometimes in conflict with other human intents. As a result, organisations don't demonstrate a 'unilateral will' but rather have a variety of competing and perhaps conflicting purposes when it comes to using technology. It follows that human interaction procedures of various types are held responsible for real outcomes as a result of this subcategory (Chege et al., 2020; Heslina & Syahrani, 2021; Oehlhorn et al., 2020; Rai & Selnes, 2019; Shahreki et al., 2020; Wamba et al., 2017). A simple illustration would be the existence of conflicting interests between management and end users. Technology may help senior management save money by lowering the number of HR employees, but HR workers have a strong desire to keep their workspaces in good shape. Complex interactions will ensue as a result of the application of matching technologies. Lower-level managers will try to impose downsizing, but HR staff will fight back in many different ways, including by "creating" new critical duties like data upkeep or destroying rationalisation opportunities. The effects on HR headcount will vary depending on the specifics of each step in the process, and they may also evolve over time. Because of the intricacy of these processes unwanted and unanticipated outcomes are included in this explanation as well. Dynamic changes throughout time are also conceivable.

The limitations and capacities of technology are viewed as a thwarting of human will in a second class. Consequently, it is vital to take into account technology potential and restrictions, as well as human intents and use activities, in order to understand the implications. To a certain extent, it is expected that technology can play a different function and trigger a variety of potential developments (Bol et al., 2009; Kleis et al., 2012; Lai, 2017; Sabherwal & Jeyaraj, 2015; Virdyananto et al., 2016; Sarwar et al., 2022). When these possibilities are put to use in a certain way, real changes begin to take place. Because this spectrum of possible modifications is so wide, the actual implications may be quite different. In addition, the exposed repercussions will alter as the type of consumption varies over time. As a result of improper and unanticipated use, there may be unwanted and unexpected repercussions. This appears to be a subclass of the moderate determinism's third subcategory. There is a movement from free-floating notions to more moderately predictable ones

depending on the importance given to technology. Moderate voluntarism is defined by the fact that technology restricts the actual use and its repercussions, but still allows organisations to make their own decisions. To summarise, repercussions in moderate voluntarism are blamed on human limitations in decision-making power. The offered explanation has a teleological element since it is based mostly on deliberate activity. When it comes to dealing with the repercussions, the requirement of exerting some control over them becomes apparent. Unstable, undesirable, and unanticipated outcomes may result from the use of a resource for many different, dynamic uses. Management may want to use a more systematic approach to influencing the outcomes of their employees' actions, such as through rewards and training. Nuanced and dynamic human-technological interactions necessitate a great deal of complex and detailed empirical investigation. A continuum of voluntarism vs determinism is a valuable tool for categorising conceptions of outcomes. However, since determinism and voluntarism are the two extremes on a continuum, there are some middle categories that overlap. Although while the majority of conceptions may be definitely categorised into one of two categories: determinism or voluntarism. It is possible to connect the two moderate categories and their hybrid concepts. Repercussions can be mapped using the four categories provided, regardless of whether they are current or not. Generally speaking, the stricter categories are easier to understand, but they also tend to be weaker. They are not recommended for e-HRM study because of their different flaws. There is more possibility for study in e-HRM in intermediate categories, which provide more complicated but also richer conceptions of implications.

## **2. Re-Evaluate**

There has been little research on the effects of information technology on HRM, even though it has been a pioneer in the use of technology. A large body of conceptual and empirical study that directly addresses the ramifications may be found in literature, even though this is the case. The next part will examine how repercussions are conceptualised in these research in light of the previously mentioned classification. This, however, is a complex effort, because it is rarely explicitly addressed how to correctly conceptualise repercussions. It is very common for the specific elements of ideas such as genesis, divergence, or change in consequences to be overlooked. It is fairly uncommon for previous study into consequences to be based on concepts that are difficult to deduce. Instead, it appears that the various research is based on hidden assumptions about the ramifications of their findings. It's also possible to identify various concepts by analysing the researched

themes, study approaches and discussion of outcomes. There is a propensity toward concealed determinism in some circumstances when the supposed origin and the type of explanation of consequences can be deduced. For starters, terminology like "influences" or "benefits" are used to describe study themes like technological "influences" or "benefits", respectively. These words point to technology as the source of the effects that are occurring. Using statistical approaches like as correlation and regression to look for relationships between variables, empirical research designs reinforce this paradigm by seeing technology as the independent variable and diverse results as the dependent variable. Deterministic connections are often tested using these analytic approaches. In most cases, the most tangible evidence for determinism may be found in the discussion of consequences. In many cases, IT is represented as the sole or primary cause of the repercussions that may be complemented by additional dependent elements. Although deterministic research may be identified and classed accurately, studies with confusing and discordant backgrounds are equally common.

The topic of whether or not varied outcomes are to be expected is typically not raised, maybe as a result of implicit determinism. Even if clearly diverse outcomes are discovered, this feature is rarely addressed overtly. Again, it is possible to recover implicit divergences. There is no reason for merely generalising this conclusion, as additional effects have not been thoroughly studied. If we take into account how many studies have found contradictory results from the use of information technology in the workplace, the hypothesis of unidirectional effects in e-HRM considered to be unlikely. As an illustrative case, the one shown above complies with the findings of the wider field of consequence research. e-HRM is likely to have similar, if not diametrically opposed, outcomes. Studies that are easily accessible don't appear to anticipate dynamic shifts in effects. Consequences will arise immediately following the implementation of new technology and will remain in place, it is tacitly believed. At the very least, no studies have been conducted to test for changes in effects over time using a longitudinal empirical design, which would account for dynamic changes. There are no results that show dynamic shift in repercussions since they haven't been expressly addressed. Unexpected and undesirable effects are, on sometimes, discussed. Most often these characteristics are at least briefly discussed in the event that empirical research show unexpected and/or undesirable results. In e-recruiting, for example, the attractiveness of a website's design has little impact on the number of applicants it attracts. Undesired outcomes include, for example, a rise in the number of candidates but a drop in their quality in electronic recruitment. E-unanticipated HRM's and unwanted repercussions

have not yet been thoroughly studied, although at least some of these issues have been acknowledged in prior study.

Implicit determinism is incompatible with consequences' manageability, hence the question of how to influence outcomes, such as invoking desired or avoided outcomes, is not addressed. The general success of information systems might, on occasion, be attributed to diverse implementation measures. Measures such as user training have been proven to support the overall success of IT in HRM, for instance. As a result, it can be concluded that the repercussions are 'controllable' to some extent. There is no comprehensive and systematic evaluation of controllability. For this reason, there isn't much study on the subject of repercussions' researchability since the concepts that underlie them remain implicit. Especially in empirical research, research design and technique are of course described in generic terms. To summarise, past evidence demonstrates a lack of awareness of the situation since the idea of repercussions is not explicitly explored. The idea of consequences, on the other hand, is very important since it dictates the appropriate questions to ask, the viable designs to use, and the probable outcomes of any consequences study. Strict determinists, on the other hand, are unlikely to look into the possibility of actively controlling the repercussions of their actions, which might have a significant impact on e-HRM practise. As a result, future research must include an explicit idea of repercussions in order to eliminate any ambiguity or inconsistency in the background assumptions.

### **3. Recommendation**

The next part aims to provide a clear and rigorous idea of repercussions based on the foregoing classification and review, which may direct future research efforts and future practical concerns. It does so by bringing back, expanding and developing past work on the consequences that highlighted the varied and dependent nature of the effects on the usage of information systems possibilities (Aydiner et al., 2019; Esangbedo et al., 2021; Gopinathan & Raman, 2016; Kavanagh & Johnson, 2017; Oehlhorn et al., 2020; Pacauskas & Rajala, 2017; Shahreki, 2019b; Tummers et al., 2019). According to the proposed notion, organisations might use technology in a different way to achieve their goals. Here, effects are seen as capabilities rather than as a result of an action. To illustrate the moderate voluntarism category, the following notion is required to exhibit the basic explanatory pattern but provides some improvements and specifics.

### **3.1. The Source of the Outcomes**

Conceptually, the notion integrates technological possibilities as well as organisational utilisation in order to explain the occurrence of effects while also making reference to both plausible causes of outcomes concurrently. A spectrum of possible uses for a particular information system is posited, with varying levels of intensity, intent, and skill among many other factors to consider when deciding how to use it. As a result of this wide range of possible applications, it is clear that results are not predetermined. To put it another way, there are generally spectrum of possible outcomes for each consequence dimension. Therefore, organisations' role in causing consequences is to select from among a variety of alternative uses and, as a result, to bring about a certain set of consequences. An Enterprise Resource Planning (ERP) system, for example, may be utilised to automate all operational HR functions. This might lead to a reduction in HR staff. In fact, if utilised as a foundation for a comprehensive strategy HRM (Amberg & McGaughey, 2019; Delery & Roumpi, 2017; Kataoka et al., 2019; Kramar, 2014; Marler & Parry, 2016; Shahreki et al., 2022b), the number of employees may stay the same or even go up in the long run. There are a wide range of possible outcomes for the HR department's headcount as a result of using the ERP system under consideration. It is therefore possible to apply these spectra to all possible outcomes of an information system. As a result, a particular use of a system is likely to result in a huge number of unintended effects. As a result, diverse effects might be interconnected inside these bundles. Some e-learning systems have the ability to affect the cost and quality of learning, for example. If the system in issue is viewed individually, it has the ability to both cut training costs and improve training quality, if implemented correctly. However, when the expenses and quality of training are taken into account, there may be a trade-off. As a result, cost-cutting measures may hinder quality-improvement measures from being fully utilised, and vice versa. Result spectra differ inside and between distinct information system types, in addition to their interconnectedness. It is for this reason that the outcome spectrums supplied by various ERP systems may differ. Moreover, ERP systems have distinct consequences compared to other information systems, such as e-learning systems. To summarise: e-HRM outcomes can be explained in part by the unique use of available technical resources by an organisation's management. Moderate voluntarism is the appropriate label for this notion since it requires just a minimal amount of human freedom.

### 3.2. Description of Outcomes

Information systems are used by individuals and organisations to achieve some of their objectives. As a result, information systems are viewed as a tool for achieving a certain end goal. Individuals and organisations also have restricted options when it comes to the type of information system they may use and the manner in which they can utilise it. There are consequences, but they're not the result of something that happened. This shows that the concept's explanation is clearly teleological rather than causal.

### 3.3. Differences in Outcomes

Moderate voluntarism's inconsistent outcomes can be understood and explained through the use of IS, as defined by this notion. As indicated above, the ability to select from a wide range of available options is often accountable for a wide range of outcomes. Though the notion of IT capabilities is a good starting point, it may be utilised to further explain the differences between the two approaches. When it comes to information systems, there are a number of ways in which they differ from one another. An initial explanation for the diverse outcomes can be found in these differences. It is also feasible to indicate the many uses that can lead to a variety of different outcomes. When it comes to the wide range of conceivable uses, we may expect a wide range of possible results, such as higher and lower pricing, central and decentralised organisation, and so on. By referencing unambiguous limits, the notion eliminates arbitrariness. There is, of course, no way to predict the consequences of even the most widely used information systems. An example of an administrative HR expenditure reduction tool is a pay roll system, but there is a set bottom limit that cannot be exceeded by any form of utilisation. It is not necessary for all of the outcomes of a particular information system to have extremely broad spectra. As a result, within a set of outcomes, there may be only a limited range of possibilities for change. Divergent but not arbitrary outcomes are possible using the idea of utilised IT capabilities.

### 3.4. Dynamic Modification of the Outcomes

A key benefit of the proposed theory is that it can account for variations in consequences over time. Technological effects are unaffected when the underlying information system does not change. However, the organisational contribution to consequences, for example the kind of usage, might fluctuate. Changes in the way potential is used will naturally lead to changes in the outcomes that result from those changes. As an example, the quality and timeliness of HR data may increase soon following the installation

of an employee self-service system due to employee training efforts. The quality and timeliness of the data may degrade if employees lose interest in the system over time, making the system even less reliable. Unmodified information systems' potential for use remains constant across time, but actual use and the implications of that use may not be so constant.

### **3.5. Anticipated and Acceptable Outcomes**

When the anticipated and acceptable outcomes are combined, a number of possible combinations appear, each of which may be described using the idea of employed IS capabilities. Consequences may be sought and expected in many cases. A payroll system's expected outcomes, such as reduced costs and increased speed, can be predicted in advance of implementation. The primary objective for implementing information systems is to achieve these kinds of anticipated and desired outcomes. However, there may be unintended and unwanted outcomes. Unexpected repercussions can have a variety of causes, the most common of which being the complexity of the resultant bundles. Despite the fact that some of the obvious implications of a bundle may be foreseen, further unintended repercussions may be difficult to predict. As an example, a trade-off between the quality and expense of training might lead to unanticipated outcomes. Unexpected repercussions can have both positive and negative outcomes, depending on the situation. Unanticipated outcomes can also be explained by the fact that there are three main types of usage. A first type of unanticipated use is an abuse of the information system, which is often caused by a lack of proper training. These misjudgements might vary from individual operational missteps to major organisational miscalculations. This results in a wide range of unexpected and undesirable effects. It is also possible for individual users to intentionally abuse the system, resulting in a wide range of unforeseen uses. Intentional abuse can take many forms, ranging from small-scale frauds like fabricating one's own attendance records in a self-service system to outright sabotage like the introduction of computer viruses. If you use it this way, you'll get unexpected and unwanted outcomes. When new and unexpected use options are discovered by users, it expands the possible outcomes for the system. This is known as "updating of systems", which is also known as "repetition" (Muller & Ulrich, 2013; Pacauskas & Rajala, 2017; Pan et al., 2008; Bashir et al., 2020). When an employee portal's forum function is used to illegally sell private goods, it's considered re-use. Unexpected re-use, on the other hand, might lead to effects that were not intended in the first place. This might be an unexpected but ultimately beneficial approach for managers and HR professionals to use a particular information system if, for example, they communicate by

utilising empty arrays of employee records. E-HRM is therefore an intentional measure in organisations, but it will also have unintended and undesirable repercussions.

### **3.6. Outcomes That Are Simple to Manage**

Although repercussions may be managed, the subject of the concept's practical ramifications for practise is also addressed. An important result is that occurring favourable consequences might be unstable over time and can convert into or come together with bad consequences, given the fundamental role of real consequences for practise. As a result, while the notion originally validates the requirement of "controlling outcomes," it does not justify the actual viability or effectiveness of such a strategy. Certain fundamental steps might be given nonetheless. Any e-HRM initiative should start with a clear understanding of the intended and undesirable outcomes that might result. In order to avoid unintentional modifications, companies should be aware that e-HRM deployment may result in significant alterations. Accordingly, two broad starting points for managing consequences are to influence the information system's capabilities and to influence its use. To begin with, information systems development or acquisition should be tightly linked to consequences by estimating probable outcomes and measuring the degree of compliance with planned outcomes. The technological implementation procedures should also aim to achieve the intended results by eliminating abuse chances as much as feasible. In addition, the second factor must be taken into account and the specific use of systems influenced. For this reason, it is essential that organisations utilize their information systems strategically and with an eye toward getting the desired results rather of just relying on the technology to do the work for them. The goals of an information system should be clearly communicated to users during first training. It is important to illustrate how to use the information system for these purposes, rather than merely offering features and instructions for the program. In order to accomplish the intended outcomes, a continual monitoring of usage and the resultant repercussions and the related real-time actions are required. Taking such steps can help you achieve your goals while also keeping you safe from any unintended effects. Consequence management of e-HRM initiatives is proposed here, and two main beginning points are outlined in the presentation. Future studies should, however, examine whether or not these proposals are feasible and successful.

### **3.7. How Outcomes Can Be Studied**

Lastly, examining the concept's researchability reveals ramifications for the future. When compared to earlier implicit methodologies, the above-mentioned idea of consequence research undoubtedly involves various challenges. It is at first difficult to explain the occurrence because of the usage of the term "capabilities". Research in the future should be centred on complex networks of interconnected, dynamic, organisationally created outcomes, rather than on single, simple causes. Not only does this make more explanations necessary, but also relates to elusive concepts like "technology capabilities" and impossible to forecast terms like "organisational utilisation". According to Scheall (2015) and Di Nuoscio (2018), the explanation is a "a description of the idea" that explains the fundamentals but cannot forecast the precise consequences of individual information systems utilised in particular organisations. Though important, empirical consequence research is difficult to do in order to develop these requirements. Future research should begin by tracing the whole chain of events that led to a certain conclusion. In spite of potential's elusiveness, the real potential–usage–consequences sequences should be the focus of empirical investigation. However, instead of focusing on a single outcome, researchers should look at the entire bundle of outcomes, and then analyse the data to see if there are any relationships between the outcomes. In addition, it is necessary to take into account the dynamic nature of effects. For this reason, long-term methods that clearly consider the possibility of changing usage patterns over time and the resulting change in consequences are once again warranted. Concerns may arise with study conclusions that are just tautological, such as whether or not the use of web-based training would reduce, raise, or not affect training expenses. Despite the fact that these propositions are self-evident, they cannot be used as a guide for practitioners. Instead, the prevention of tautology can be achieved by the study and analysis of probable usage consequences sequences. Conclusions are something we should strive towards and are capable of achieving, such as "training expenses will be reduced compared to not using the specified information system" in future study. This type of web-based training can and should be used consistently. Non-tautological discoveries may be applied to practise, and this is clearly the case here. Consequences research will undoubtedly become more complicated if the proposed approach of using IS capabilities as consequences is adopted. Nevertheless, it would be strange to reject the notion due to its complexity and keep simpler concepts that, while easier to explore, actually lead to mistakes.

#### 4. Conclusion

It was the goal of this article to present a classification of information systems repercussions in HRM, an evaluation, and a concrete recommendation. In the first place, a detailed classification of current and potential consequence concepts could be obtained from a description model, and the corresponding categories could be described, contrasted, and basically assessed. As a starting point for thinking about the notion of consequences, this should be helpful. Additionally, the classification gives general criteria for picking a conceptualisation in future endeavours, in addition to recognising and classifying concepts from prior consequence research. Second, a general absence of clear conceptions of repercussions in preceding research has been observed and, as a result, a low degree of problem awareness has been revealed. Background conceptions appear to be vague and discordant. Also, there was a hint of a latent determinism that might be observed in some cases. A better understanding of the effects should be engendered in future studies as a result. If you conceive about consequences as utilised IS, you may be able to explain previously frustrating empirical phenomena like divergent or dynamically shifting consequences, which are sometimes difficult to understand in terms of traditional concepts of consequences. Some early proposals for systematically managing the effects of e-HRM might be given as a key implication for practise. The results might have some ramifications for the direction of future study. Despite the fact that these findings will likely complicate the respective duties of practise and research, we expect that they will aid both in advocating basic implicit notions and gaining a deeper knowledge of the repercussions of e-HRM.

#### Conflict of Interest

The authors declare that they have no conflict of interest.

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