

# AN ANALYSIS ON ENTERPRISE RESOURCE PLANNING (ERP) SYSTEMS IN GARMENT INDUSTRY

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## **ABSTRACT :**

The ERP programme offers cutting edge technology for effective business operations. The program's stated goals include data tracking and the improvement of internal processes. Enterprise resource planning (ERP) systems are built to facilitate industries like the textile and garment industries' crucial strategic planning processes. It makes it easier to generate reports, which should be refreshed whenever there is a change. Over the past few years, the garment industry has undergone constant transformation. One goal is to conduct operations in a methodical business. As a result, ERP may be used to organise the necessary resources and maintain accurate records. This paper reflects Critical study on Enterprise Resource Planning(ERP) in Garment Industry.

**KEYWORDS :** centralise , garment industry , approachable , modules , manufactures

## **I ERP SYSTEMS IN GARMENT INDUSTRY:**

ERP's ability to centralise the business's data and procedures across departments makes it a cost-effective tool for cutting operational expenditures. There won't be a shortage of stock or a need to cut costs elsewhere. Since everything has been prepared in advance, each time a resource is required, it will be there. Keeping tabs on the stockroom is an added bonus that simplifies day-to-day operations. There is a record of everything that is entered into the data warehouse, planning it simple to schedule ahead of time. Since everything is tracked, it's simple to determine how much anything actually cost. Negative ambiguity is eliminated, making the database more approachable. India's domestic readymade garment industry would double in size within five years due to economic development, streamlined government policies, an increase in fashion focus and brand recognition, and higher customer demands, as stated by CMAI President Rahul Mehta. The present size of India's garment industry is estimated to be approximately Rs 2,00,000 crores, according to a recent CMAI analysis of market figures. About Rs 50,000 crores of this total is allotted to ready-to-wear apparels like dhotis and sarees. The unorganised clothing industry is estimated to be worth around Rs 1,10,000 crores, while the organised retail sector is worth roughly Rs 40,000 crores. In the two years when a 10% excise charge was in place on the organized branded clothing industry, its growth rate was flat. Growth rates are predicted to increase from 6% to 7% in 2014–15 to 10% to 12% in 2015–16 as a result of the elimination of excise charge.

## ERP Application Modules for Garment Industry

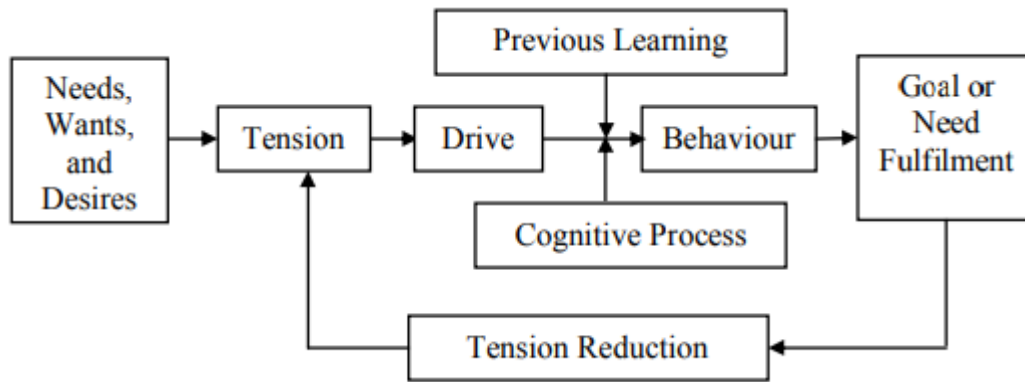
Clothes manufacturers need to be connected, responsive, and agile both internally and throughout the extended enterprise in order to succeed in an industry defined by shifting customer needs and shorter product cycles. This is made feasible with the aid of the appropriate ERP solution and a competent partner in its implementation and ongoing maintenance. ERP providers ensure a connected, responsive, and agile enterprise by integrating processes and business systems, making information available in real time, and boosting visibility throughout the whole value chain. With their well-integrated components, they can automate the entire enterprise. ERP was developed with features including multi-language support and the ability to oversee the full production process, from yarn procurement to finished garment packaging.

ERP Apparel includes the following subsystems:

- **Merchandizing (Sales)** - Enquiry, Quotation, Follow up, Communication, Sample orders, Sales orders, Order grouping and review with reports,
- **Procurement & Inventory Management** - Purchase order, Goods receipt, Supplier invoice, Debit / Credit note, Goods return, Material outward inspection, Pending orders, Supplier evaluation, Stock maintenance with reports.
- **Production Planning & Control** - Yarn/Fabric program, Accessory and packing material, Program allocation jobs, Budgeting, Quotation, Bill of materials, Scheduling, Approvals & follow ups, Process sequence, Production program, Program closure, Process management, Production and floor management, Printing/Embroidery and other stages management, Sewing, Checking/Ironing/Packing/Dispatch summary, Quality and Inspection with reports .
- **HR & Payroll Management** - Employee records, Pay slip, Contract employee details, Loans and advances, Salary components, Employee history with reports
- **Financial Accounting** - General ledger, Group ledger, Vouchers, Cash, Bank, Journals, Sales, Purchase, and Profitability analysis, Financial position analysis with reports
- **Shipping and Documentation** - Shipping bill, Letter of credit transfer, Chamber of commerce, Bank negotiation, Bill of exchange, Bank-realization certificate, payment history with reports
- **Web based Reports** - Buyer order statement, Buyer order cancellation, Job order statement and order planning and position with reports
- **Housekeeping Setup & Registration** - Grand rights, User setups, User entry log maintenance, and another customization

## II DEVELOPING A CONCEPTUAL MODEL FOR ERP ADOPTION

Needs and wants exert a compelling force, and that force is what we call motivation. The choice to acquire a thing to meet one's needs or wants is tempered by the rewards and risks connected with that purchase, which are generally appraised based on prior knowledge or the results of some sort of cognitive process (Figure 1).



**Figure 1 : Model of the motivation process**

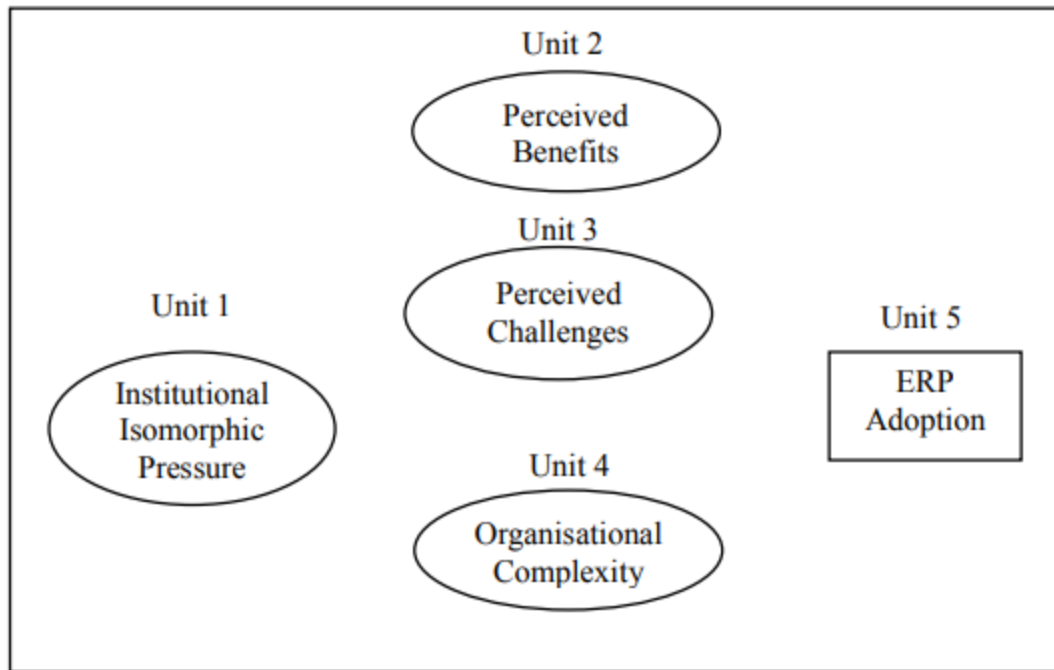
Based on the work of Durgee et al. (1996), it is claimed that institutional isomorphic forces are the primary factor behind ERP adoption. Considering the pros and cons of ERP adoption as well as the complexity of the organization that necessitates its use is important. Several professionals in the industry and academics were questioned to glean further information about the true causes of these phenomena. Involving industry insiders helps clarify the study's applicability and significance. The literature found on the specified topics is reviewed. In order to better understand the issue at hand, researchers employ a method similar to zooming in on a photograph to zero in on the specifics. The cited works provide extra detail within this specific context. The first section of this chapter provided an overview of the numerous lines of inquiry and the current state of understanding. Domain space is reduced to notions that may provide a solution to the research topic.

### **Construct Analysis**

Within the constrained scope of study, the notion is decomposed into its constituent parts or dimensions, known as constructs. There is a post-it note next to each structure. The post-it is rearranged and reconfigured until a reasonable relationship can be made between the notes. You may also see the connections between them that have been established via reading these works. At this point, the researcher's prior experience and the advice of subject-matter specialists are refined into a model.

### **Developing an Initial Model**

Holton and Lowe presented a theory construction strategy in 1978 that would establish the theory's foundational tenets. As a result of translating the theory's components into model form, a preliminary model may be created. Constructs are ideas that describe universal aspects of the world around us. The terms that Dubin used to identify the components of theoretical frameworks are appropriate. Theorists start to zero down on these parts after they learn which constructions from the construct analysis have the most bearing on the result. Dimensions, constructions, and variables are all synonyms for the same things, and the rectangle or ellipse is only the visual representation of the units. The study's components are as follows: (1) Institutional isomorphic pressures in ERP adoption (2) Advantages; (3) Difficulties Complexity in Organizations and Enterprise Resource Planning (ERP) Implementation (Figure 2).



**Figure 2: Units of the conceptual research model on motives that drive the ERP adoption**

### **Concept 1 - Institutional isomorphic pressures in ERP adoption**

Since Porter (1990) made the notion of clusters public, researchers and policymakers have been interested in studying and implementing them. The subject of localization of industries, as dubbed by Marshall in 1920, was examined before to Porter. Clusters are groups of related businesses and organisations that operate in close proximity to one another and share similarities and synergies. A cluster's geographic scope may extend from a single municipality or state to an entire nation or even a group of contiguous nations (Porter 1998). There is a two-relationship street of trust between the business and the group. It is the individual firms' contributions to the cluster as a whole that define it, and it is the individual firms themselves that get the benefits of participating in the cluster. The closeness of the entities making up a cluster allows the whole value chain to work together more efficiently and provide greater results, giving the cluster a competitive edge. Collectively innovating, improving, and adapting are viewed as the primary drivers of competitive advantage. When compared to non-cluster equivalents, clusters are often cited as examples of increased productivity and novel approaches to old problems.

According to Arthur (1990), a cluster's knowledge spill over, which results in collaborative creativity, arises both through informal arrangements like joint ventures and joint research work with universities and from more formal ones like daily contact and networking due to physical closeness. This dependency between the company and other organisations within the cluster may be interpreted beyond the work context of a simple resource sharing, leading to an effect that forms and, at times, dominates the relationship of the firm. Isomorphism, as postulated by Meyer and Rowan (1977) and DiMaggio and Powell (1983) in their institutional theories, is the master bridging mechanism inside the cluster that makes organisations homogeneous and increasingly identical in structure over time. DiMaggio and Powell singled out peer pressure as one of the social drivers that drives enterprises to adopt one another's innovative methods, resulting in institutional isomorphism. They've pinned out three overarching causes of isomorphism: There are three types of isomorphism: I coercive

isomorphism, in which an organization is compelled to adopt structures or rules; (ii) mimetic isomorphism, in which an organization mimics the practices of successful organizations when confronted with ambiguity and uncertainty; and (iii) normative isomorphism, in which an organization adopts certain reforms in response to professional pressure. As a result of the commonalities induced by these three processes, businesses are better able to communicate with one another and establish credibility in the eyes of their respective target audiences.

The increased globalisation and fierce competition in today's business climate necessitate further degrees of organisational integration and the use of IS. Similarly, modern consumers have grown accustomed to receiving tailored items in a short amount of time. An integral part of this is a reliable supply chain. In addition, companies are devoting more resources to their core strengths by subcontracting or outsourcing other aspects of their operations, which necessitates a tight relationship between their business processes. Furthermore, there is a growing need to coordinate the operational operations of otherwise autonomous enterprises due to the proliferation of strategic partnerships between business partners, such as just-in-time inventories. As a conclusion, a company's dependence on e-commerce business models necessitates technological infrastructures and the integration of its processes with those of its suppliers of products and services and its distributors. Because of these causes, there is a pressing want for corporate enterprise. From the initial acceptance stage, institutional pressures continue to shape the development and upkeep of sophisticated enterprise systems. ERP integration in an organisation is affected by both internal factors and external institutional context.

Institutional theory has been used to provide an explanation for why some businesses have adopted ERP systems. Technical isomorphism is a new kind of isomorphism that was introduced by Benders et al. They demonstrate how the firm's efforts to differentiate itself from rivals were thwarted by the ERP system's insistence on conforming to the organization's way of doing things. According to research by Liang et al., top management exerts a moderating effect on the effects of coercive, mimetic, and normative pressures on ERP adoption. Beyond the purely technical merits of an organisational practice, the institutional sociology framework highlights the role of regulatory, normative, and cognitive variables in shaping a company's choice to implement said practice. The three dimensions used to evaluate institutional isomorphic pressures are as follows, as per Teo et al. and Liang et al. (2003).

a) **Coercive pressures:** The restrictions imposed by the government or suppliers of resources from the outside constitute the basis for coercive pressures. Coercive isomorphism will be the name applied to rules, requirements, and regulatory forces. Federal, state, and local governments, as well as private investors and financial institutions, are the most probable funders.

Evidence indicates that coercive pressures play a substantial role in driving people to use new technologies. Teo et al. showed that because EDI is a dyadic technology linking business partners, most coercive pressures come from dominant suppliers and customers. While the emerging market does play a larger role in shaping business policy and practice in developing nations, government agencies still have a substantial impact. Certain ERP modules, for instance, are necessary because of the direct pressures from regulatory bodies on the pharmaceutical industry to adhere to particular report forms or standard processes. The ERP accounting modules conform to the government's required report forms.

Perceived dominance of suppliers as adopters, perceived dominance of customers as adopters, and overall coercive pressures are all quantifiable. Respondent perceptions of supplier dominance were gauged by inquiring as to whether or not the respondents'

companies were dependent on the adopters in question, whether or not they had the option to switch to different suppliers, whether or not it was crucial to maintain good relationships with the adopters, and whether or not the adopters in question were the core suppliers in their industry. By substituting "customer" for "supply," we were able to utilise the same survey questions to gauge how dominant consumers felt they were in comparison to suppliers. When a parent company has adopted enterprise resource planning (ERP), subsidiaries may feel more pressure to adhere to the pressures set by the parent.

**b) Mimetic pressure:** Mimetic pressures result from trying to emulate the behaviors of others who are already successful. Such action lessens apprehension. Organizations' business strategies will be categorized as mimetic pressures when they are similar to those of successful rivals, collaborators, or organizations with which the organization has close links. When senior management observes that other companies have implemented ERP and gained a competitive advantage, it exerts a moderating influence on the effect of mimetic pressures on the decision to adopt ERP. When ERP programs are uncertain in their outcomes, senior managers often replicate the activities of their successful colleagues or rivals to protect their reputations and keep their judgments from looking questionable.

The level of adoption by rivals and the degree to which this adoption is seen as successful are two indicators of mimetic pressures. The second sub-construct was evaluated based on the responses of those who had observed the adoption and success of ERP by their rivals, as well as the positive reception that ERP had gotten from those working in their suppliers' and customers' respective industries.

**c) Normative pressure:** Professional and socially approved and responsible discourses are the root of normative pressures. Professional consulting organisations, management books, and academic institutions are likely origins.

The primary feature of ERP systems thought to preserve best practices for the industry is strongly tied to the function of normative pressures in ERP adoption processes. Suppliers, customers, consultants, and governments are all part of the organisational field that evaluates and promotes the product as a whole. Top-level managers' interactions with suppliers and customers, their professional networks, and the growing number of ERP user conferences sponsored by vendors all serve to spread normative pressures across an organisation.

Members of dyadic relational channels and multilateral organisations like professional, trade, and industry organisations may exert normative pressures. Like the mimetic and coercive constructs for which a case may be made, the normative pressures construct is operationalized as a formative, emergent construct made up of three sub-constructs.

## **Concept 2 - Perceived benefits of ERP**

ERP's integration, adaptability, and scalability appeal to businesses as a whole since they help the system meet a wide range of needs. Perceived utility or long- and short-term implications are seen as crucial indicators of IS adoption in the TAM and Triandis model. According to research by AmoakoGyampah and Salam (2004), a favorable attitude toward an ERP system is more likely to arise when users are convinced of the system's benefits. Just as the barrier or risk creates a problem, it also has a negative impact on ERP system adoption. Both the advantages and disadvantages of using an ERP system have been explored by several academics, who have compiled exhaustive lists of both.

It's not unexpected that a more advanced software package, like ERP, might provide greater opportunities for advancement inside an organisation due to its features. This might be anything from short-term gains in business to long-term strategic benefits like the expansion

of available services and the introduction of new ones.

Perceived utility and perceived ease of use are key factors of people's intentions to use computers, and these intentions are found to predict actual use relatively well, as suggested by the Technology Acceptance Model (TAM). Based on these eight contending hypotheses, we were able to develop UTAUT as a means of gauging the prospects of new technologies and the factors that encourage its widespread technology. UTAUT posits that three factors—expectations of performance, expected levels of effort, and the influence of others—have a significant impact on the likelihood that someone would actually utilise. Real-world behaviour is profoundly influenced by both the user's intent and the surrounding environment.

Considerable study has been done on the challenges associated with deploying such systems and realising the expected advantages. In an assessment of the relevance of intangible advantages, Murphy and Simon (2002) noted that there are two main ways of looking at the question of how to maximise prospective gains: in terms of hard money and in terms of good will. They used a four-point scale to rate the degree to which the benefits framework created by Shang and Seddon (2000) were tangible and quantifiable: little, some, largely, or entirely. Cost savings, shorter production cycles, and enhanced quality are just a few examples of the measurable and concrete advantages to operations that may be attained. Enhancements to both quality and customer service are measurable and may be seen very immediately. The majority of the gains in productivity that can be attributed to managers' compensation are observable and measurable. Some of the advantages of better resource management, decision-making, and planning are more obvious than others. Business expansion, the creation of new business innovations, cost leadership, and the generation of product differentiation are all strategic benefits with a fair amount of tangibility, whereas support for existing business alliances and the development of new ones are less tangible. Building business flexibility through IT infrastructure has limited tangible and quantifiable benefits, whereas reducing IT costs has complete quantifiable benefits. Expanding the capacity of the IT infrastructure may be measured to some extent. All organizational advantages, including aiding in organizational transformation, easing the learning business for businesses, giving employees more say in strategic decisions, and creating a shared vision, are difficult to measure and put a price tag on.

### **Concept 3 - Perceived challenges of ERP**

The issue that ERP systems provide may be mitigated if businesses take the time to learn about their users' information needs, the system's benefits, and any potential pitfalls. Attempts to adopt ERP systems are not without its dangers, and they often end up costing more and taking longer than anticipated. Having this implemented causes problems for the company both during and after. Adoption is hampered by opposition and training needs. The inability to foresee and account for potential dangers is the biggest obstacle to implementing ERP. The probability of an ERP rollout's success increases when risk management is implemented early and maintained throughout the project's lifecycle.

The adoption goal is hampered by the incompatibility and complexity of ERP systems. With the Triandis model, perceived complexity is the reverse of the TAM's perceived simplicity. There is a correlation between the end user's perception of the ERP system's complexity and their level of satisfaction, which in turn limits the system's actual use. Software packages, such as enterprise resource planning (ERP), boast of bringing "Best practises" yet are heavily influenced by organisational culture and convention, especially in Asia. Resources struggle to personalise ERP software because to a lack of time and manpower as well as strict deadlines.

There is a positive correlation between compatibility and ERP satisfaction, and non-use of the ERP systems might come from compatibility issues.

The consulting team's experience with a lack of executive assistance throughout implementation was not taken into account in the polling. According to their analysis, the difficulties reported by the respondents may be the result of insufficient backing from higher-ups. The poll also concludes that unrealistic expectations of time and money were the root of the issue. The ERP system's drawbacks include: the difficulty in identifying the logic of ERP System and its complexity; vendor packages that aren't a good fit for businesses; and a lack of vendor and consultant knowledge of business and industry-specific requirements and configuration.

The performance of an organisation and the potential benefits of implementing an ERP system are both hindered by the difficulties inherent in doing so. In the absence of a solution, obstacles become sources of danger. ERP is extremely risky due of its complexity. Project management risk, technology risk, and process risk are the three main types of ERP adoption risk.

Kamhawi (2008) investigated the difficulties of introducing an enterprise resource planning (ERP) system in Bahrain and discovered that all 27 of the stated difficulties were seen as significant by the respondents. He divided them into the following four groups: technical, change management, resources, and project management. The phrase "resource problem" is used to describe issues with allocating time, resource, trained personnel, finances, and other types of resources. Business process reengineering (BPR), removing the old system, finding seasoned implementation partners, and ensuring ERP is in line with the company's overall strategic strategy are all examples of project management problems. Challenges in change management include user resistance, lack of top-management management support, reluctance to change, and inadequate user training. The technical difficulties include customization, sophisticated functionality, complex application management, vendor support, working with implementation partners, merging old and new systems, security, IT infrastructure, and linking functional systems.

#### **Concept 4 - Organisational complexity in ERP adoption**

The organisational qualities of an organisation have been identified to be important predictors of IT adoption in several studies. We may also find literature on the role of organisational factors in ERP implementation. One of the most important considerations in deciding whether or not to implement ERP is the nature of the industry. A study by Hung et al. (2004) and another by Pan and Yang (2008) found that the size of an organisation is the most influential factor in their choice to use an enterprise resource planning system. ERP needs vary depending on the industry type and the specifics of the manufacturing process, which can range from Made to Order (MTO) to Made to Stock (MTS) to Assemble to Order (ATO) to Engineered to Order (ETO).



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