

# Business Process Orientation: Case of Croatia

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**Abstract**—Because of the increasing business pressures, companies must be adaptable and flexible in order to withstand them. Inadequate business processes and low level of business process orientation, that in its core accentuates business processes as opposed to business functions and focuses on process performance and customer satisfaction, hinder the ability to adapt to changing environment. It has been shown in previous studies that the companies which have reached higher business process maturity level consistently outperform those that have not reached them. The aim of this paper is to provide a basic understanding of business process orientation concept and business process maturity model. Besides that the paper presents the state of business process orientation in Croatia that has been captured with a study conducted in 2013. Based on the results some practical implications and guidelines for managers are given.

**Keywords**—Business process orientation, business process maturity, Croatia, maturity score.

## I. INTRODUCTION

**B**USINESS Process Orientation (BPO) is a business organization concept that is being adopted by companies worldwide. Companies wanting to improve their performance and stay competitive are introducing and adopting a process view of business in order to enhance their overall performance. BPO can slim down operational costs, promote customer relations through satisfying customer needs better and increase employee satisfaction through harnessing the benefits available in organizational knowledge [14]. As this is a complex process done over a long period of time, companies can attain various degrees of BPO acceptance through adjustments of their business processes. Over the past few years methodologies for analyzing the maturity state of BPO have been developed. Maturity model consists of a number of stages through which companies evolve as they increase the adoption of process oriented practices [15]. But, the fact is that the most of the literature on business process orientation has been in the popular press and lacks research or an empirical focus.

Based on the original study of business process orientation [9], an empirical research was carried out in Croatia. The aim was to investigate understanding of the process view and process maturity levels of Croatian companies. In the paper the state of the business process orientation in Croatia is examined.

The rest of the paper is structured as follows. The second section describes the theoretical frame of reference, which aims to provide a basic understanding of business process

orientation. In the third section a detailed description of the BPO elements which make BPO construct is presented. In the Section IV, the concept of BPO is studied on four maturity levels. Finally, the empirical study is described and the results of the analysis are shown (Section V). The paper ends with some concluding remarks.

## II. BUSINESS PROCESS ORIENTATION

Organizations are continually under competitive pressures and forced to re-evaluate their business models and underline business processes [13]. Process is defined as an approach for converting inputs into outputs. It is the way in which all the resources of an organization are used in a reliable, repeatable and consistent way to achieve its goals. A business process is a coordinated chain of activities intended to produce a business result or a repeating cycle that reaches a business goal [10]. Essentially, there are four key features to any process. A process has to have [14]:

- (1) predictable and definable inputs,
- (2) a linear, logical sequence or flow,
- (3) a set of clearly definable tasks or activities,
- (4) a predictable and desired outcome or result.

Business processes represent a core of the functioning of an organization because the company primarily consists of processes, not products or services. In other words, managing a business means managing its processes [8].

Business Process Management (BPM) refers to a systematic, structured approach to analyze, improve, control and manage processes with the aim of improving the quality of products and services [4]. BPM is described as structured approach to analyze and continually improve fundamental activities such as marketing, manufacturing, communications and other major elements of a company's operations. BPM relies on measurement activity to assess the performance of each individual process, set targets and deliver output levels which can meet corporate objectives. BPM is intended to align the business processes with strategic objectives and customers needs, but requires a change in a company's emphasis from functional to process orientation. BPM solves many of the problems of the traditional hierarchical structure because it [6]:

- (1) focuses on customer,
- (2) manages hands-off between functions,
- (3) employees have a stake in the final results and not just what happens in their departments.

The functional approach creates barriers to achieving customer satisfaction [15] and that is why today's companies, in order to stay competitive, become more and more process oriented.

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BPO has many definitions and the aspects that are included in the most of the definitions are [13]:

- (1) business processes have a strategic role in value creation,
- (2) processes should be continuously improved,
- (3) organization has a strong customer focus,
- (4) process owners are defined and have the responsibility for the success of the processes,
- (5) organizational structure is in line with the core process,
- (6) process performance is measured and monitored.

BPO is interpreted as the organizational effort to make business processes the platform for organizational structure and strategic planning. A process oriented organization is referred as process enterprise or as process focused organization. Although the definitions of the BPO vary, in this paper the following definition of process orientation is adopted: an organization that emphasizes processes as opposed to hierarchies with a special emphasis on outcomes and customer satisfaction [8].

The extensive literature and former research suggest that organizations can enhance their performance by becoming process oriented. Furthermore, the more business process oriented an organization is, the better it performs both from the perspective of the employees as well from an overall perspective.

### III. BUSINESS PROCESS ORIENTATION CONSTRUCT

There are many interpretations of what BPO entails and the conceptualizations are on one hand partially overlapping and on the other hand interpret the intricacies of BPO quite differently based on the tradition the authors belong to [5]. While each interpretation stresses several important points it also neglects other ones. Based on extensive literature review nine different viewpoints of BPO are synthesized into a comprehensive BPO model that takes into account majority of dimensions, frequently mentioned in literature. In order to analyze and improve BPO companies need to take the following dimensions (elements) into account [11]:

- (1) Strategic view
- (2) Process identification and documentation
- (3) Process measurement and management
- (4) Process oriented organizational structure
- (5) Human resources management
- (6) Process oriented organizational culture
- (7) Market orientation
- (8) Supplier perspective
- (9) Process oriented information technology

Next, the most important aspects of all the elements of BPO will be presented.

#### A. Strategic View

Two dominant aspects of strategic view seem to be critical [11]:

- (1) the alignment of business processes with organization's strategy possibly achieved by linking process goals to the organization goals. A well developed strategy enables optimal definition, planning and execution of business processes that implement that strategy.

- (2) active support and involvement of top management in the activities of implementing the principles of BPO into the functioning of the organization. It has been shown that, compared to projects where top management did not participate, active involvement of top management lead to higher success rates.

#### B. Process Definition and Documentation

Excellent knowledge and understanding of internal processes is a prerequisite of process orientation. Organizations need to understand how processes work, where they are being executed and how they interconnect. The following aspects of process definition and documentation that an organization must ensure are [9]:

- (1) existence of a complete and uniform enterprise,
- (2) process model,
- (3) documentation of processes,
- (4) use and update of process documentation,
- (5) definition of inputs and outputs for each process,
- (6) definition of suppliers and customers for each process,
- (7) existence of process cascades,
- (8) segmentation of business processes if they face heterogeneous requirements.

Additionally, process documentation enables and catalyzes process improvements, helps employees in understanding how end-to-end processes really work and what their role in the process is.

#### C. Process Measurement and Management

Management and measurement are closely tied. What is not measured cannot be managed. Performance measurement is a prerequisite for process redesign as it enables the alignment of organization's processes and strategy. Appropriate performance indicators encourage employees to act in alignment with the strategic goals.

Two of the most frequently cited aspects of measurement and management element are [1]:

- (1) implementation of a process measurement system through the definition of process goals (that need to be aligned with organization's goals), key performance indicators for these goals, setting of performance targets and continuously monitoring the efficiency and effectiveness of processes,
- (2) formalization of the process improvement practices and the usage of established methodologies and techniques that enable more successful implementation of new and/or changed processes.

#### D. Process Organizational Structure

Organizational structure describes the predominating configuration of activities and tasks in organization. Some of the most cited aspects of process organizational structure are [11]:

- (1) organizing work around core processes,
- (2) flatter organizational structure (fewer levels of hierarchy),
- (3) teamwork,
- (4) employee empowerment,

- (5) jobs that involve heterogeneous task and activities, not just simple work,
- (6) process ownership.

Process orientation does not require a complete process organizational structure as it has some disadvantages as well. The final goal should not be to replace vertical structures with horizontal ones, but to find a way to intertwine the advantages of both – specialization and expertise of functional structures with responsiveness and adaptability of process structures.

#### *E. People Management*

People management is a wide management discipline that deals with many aspects of managing people. With regard to process orientation, the most important aspect of people management is strategic people management that focuses on the practices connected to training and educating employees to align employee skills and knowledge with the business strategy. Closely tied with the structural elements of process orientation, the most cited elements of people management are as follows [12]:

- (1) enabling employees to work in multifunctional teams,
- (2) providing them with training and education to acquire new skills and knowledge to operate on newly defined jobs that are multidimensional, not just simple tasks,
- (3) including and involving employees in the improvement programs, as they have the domain knowledge and will need to buy-in the new processes
- (4) educating employees on techniques and methods of process improvement and redesign
- (5) communicating the changes of processes to all the employees that are affected by the changes.

#### *F. Market Orientation*

The basic goal of any process is creating value for customers (external or internal). In that regard, understanding customer needs and wishes is inextricably linked to process orientation. Organizations need to understand its customers' preferences in order to design appropriate processes that will be able to supply the output that will satisfy these preferences.

Organizations must know who their customers are in the first place. They can be internal or external. Organizational goals must be focused on external customers and that is why it is important to identify them. Customers can be a valuable source of information in process improvement efforts [14].

Knowing and understanding customers is only one part of market orientation. Organizations also need to know and understand their competition. Appropriate strategies and the underlying processes that execute them can only be set if organization combines knowledge about its customers and its competitors.

#### *G. Supplier Perspective*

Tight cooperation with suppliers is also one of the key elements of process orientation as organization's processes can span outside its borders and are tightly connected to suppliers' processes. In that regard process optimization cannot be optimal if suppliers' processes are disregarded. Clearly, organization does not have an impact on suppliers'

processes if the cooperation is transaction based. On the other hand, forming long-term relationships with its suppliers offers more possibilities for a joint and coordinated redesign of processes that span several organizations [15].

#### *H. Process Organizational Culture*

Changing organization to process oriented represents a vast change in the way business is conducted. In that sense, organizational culture plays an important role in organization's ability to change. Key values and aspects of organizational culture that are most often cited in literature with regard to implementing process orientation are [3]:

- (1) shared vision and purpose,
- (2) openness and cooperation,
- (3) creativity and positive attitude of employees,
- (4) usage of appropriate process terminology (input, output, process owner, etc.),
- (5) employee empowerment and their inclusion in decision making,
- (6) flexibility,
- (7) goal orientation,
- (8) employees' understanding that they work for end customers.

#### *I. Information Technology*

The role of Information Technology (IT) in process redesign has long been stressed as one of the more important aspect of redesign efforts. Combination of process redesign and utilization of appropriate IT support can drastically improve business processes.

Even though many authors stress the importance of IT in redesign efforts, its role can be very different at different stages of the redesign [5].

### IV. BUSINESS PROCESS ORIENTATION MATURITY MODEL

It should be noted that the concept of process orientation is not bipolar. Rather, companies can employ different levels of process orientation, based on how many and which practices that are aligned with process paradigm they have implemented. The levels of process orientation are often presented by a process maturity concept. In the current business environment, there is no scarcity of process maturity models [15]. They serve as reference models of the stages that organizations go through as they move from being immature to mature in their process orientation. The business process maturity models are based on concepts developed by researchers over the past two decades and imply that a process has a lifecycle that is assessed by the extent to which the processes are explicitly defined, managed, measured and controlled.

For the purpose of this research, the BPO maturity model was readjusted from [8]. The original model was developed based on the concepts of process maturity, BPO, and the Capability Maturity Model developed by the Software Engineering Institute at Carnegie Mellon University. The BPO construct describes a four-step pathway for systematically advancing business processes along the maturity continuum

(Ad Hoc, Defined, Linked, and Integrated level). Each step builds on the work of the previous steps to apply improvement strategies that are appropriate for the current maturity level. The following definitions are provided for the stages that an organization goes through when becoming business process oriented:

**Ad Hoc:** The processes are unstructured and ill-defined. Process measures are not in place and the jobs and organizational structures are based upon traditional functions, not horizontal processes.

**Defined:** The basic processes are defined and documented and are available in flow diagrams. Changes to these processes must now undergo a formal procedure. Jobs and organizational structures include a process aspect, and yet remain basically functional. Representatives from functional areas (sales, manufacturing, etc.) have regular meetings to coordinate with each other, but only as representatives of their traditional functions.

**Linked:** The breakthrough level. Managers employ process management with strategic intent and results. Broad process jobs and structures are put in place outside the traditional functions.

**Integrated:** The company, its vendors and suppliers, take cooperation to the process level. Organizational structures and jobs are based on processes, and traditional functions begin to be equal or sometimes subordinate to the process ones. Process measures and management systems are deeply imbedded in the organization [14].

#### V. SURVEY OF CROATIAN COMPANIES

In 2013 an empirical research was carried out. The main goal was to assess the current state of BPO maturity of companies in Croatia. In order to carry out the empirical study a questionnaire was developed. It contained 60 questions regarding BPO characteristics. The questions were distributed across the nine domains (elements) presented in the theoretical part of the paper: Strategic view (5 questions), Process identification and documentation (6 questions), Process measurement and management (10 questions), Process oriented organizational structure (7 questions), Human resources management (5 questions), Process oriented organizational culture (6 questions), Market orientation (7 questions), Supplier perspective (3 questions), Process oriented information technology (11 questions). Each question describes a particular BPO characteristic and/or business practice considered important within each domain. The degree of presence of these characteristics in the organization of a firm is measured on a 7 point Likert scale (1=Strongly disagree, 2=Disagree, 3= Disagree more than agree, 4=Neither agree or disagree, 5=Agree more than disagree, 6=Agree, 7 =Strongly Agree). The main source of data about Croatian companies was the database of The Institute for Business Intelligence and the questionnaire was sent randomly to the 1200 companies. The questionnaire was addressed to the CEOs or the chairpersons of the companies who were instructed to fill out the questionnaire themselves or give it to a competent person within the organization. 127 completed

questionnaires were returned to the research group (which accounts for 10.58% response rate). The size of the company can be determined on several bases (according to number of employees, revenue size, market share, etc.). The selected companies were analyzed according to the number of employees and its annual revenues. The distribution of companies in the sample by number of employees and by annual revenues is shown in Figs. 1 and 2.

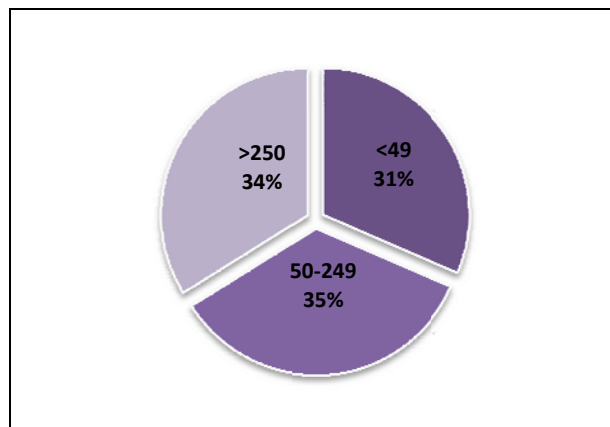


Fig. 1 Frequency of companies in the sample by number of employees (Source: Author's calculation)

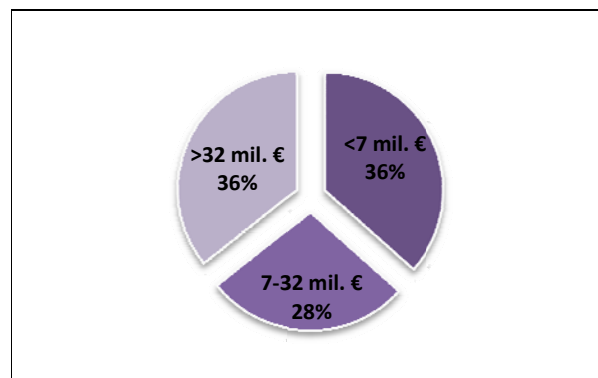


Fig. 2 Frequency of companies in the sample by annual revenues (Source: Author's calculation)

First, the data gathered from the Croatian national sample was analyzed using descriptive statistics. The compound measure of BPO construct was calculated, which revealed the overall state of business process orientation. This was done by calculating the average grade for each domain of the questionnaire. Based on the sample the compound measure of the BPO in Croatia is 4.84.

Second, in order to identify the hierarchical relationship between the groupings a set of cluster analysis procedures was conducted using Statistical Package for Social Sciences (SPSS). Cluster analysis, also denominated as "segmentation analysis" or "taxonomic analysis", aims to identify subgroups of homogeneous cases in a population. In this sense, the cluster analysis can identify a set of groups that minimizes the internal variation and maximizes the variation between groups [2]. Aiming to prepare the dataset for the cluster analysis,

based on the sum of scores of all variables from each grouping it was generated a new variable for each grouping. Later, a variable Maturity Score was generated by summing all new indicators generated for each grouping representing the maturity score for each one of the 127 cases of the sample. The Two-step cluster analysis was then conducted. The first step of the two-step procedure is formation of preclusters. The goal of preclustering is to reduce the size of the matrix that contains distances between all possible pairs of cases. Preclusters are just clusters of the original cases that are used in place of the raw data in the hierarchical clustering. As a case is read, the algorithm decides, based on a distance measure, if the current case should be merged with a previously formed precluster or starts a new precluster. When preclustering is complete, all cases in the same precluster are treated as a single entity. The size of the distance matrix is no longer dependent on the number of cases but on the number of preclusters. In the first step the maturity score was considered as a continuous variable and a fixed number of 4 clusters were defined – each representing one maturity level of business process orientation maturity model. As a second step, the hierarchical grouping is applied to the preclusters. In this second step, SPSS uses the standard hierarchical clustering algorithm on the preclusters. Forming clusters hierarchically lets you explore a range of solutions with different numbers of clusters. The 127 cases in the sample were classified considering its positions in each of the four clusters, i.e. in each of the four maturity. Due to this step, difference in Likert scale of the questionnaire and the number of maturity levels, values were mapped in order to assess the maturity level for each data set record (Table I).

AdHoc	1,0-3,9
Defined	4,0-4,8
Linked	4,9-5,6
Integrated	5,7-7,0

Source: Author's calculation

Companies with BPO value between 1,0 and 3,9 fall into level 1 of BPO maturity (21,6% companies from the sample). Companies with BPO value between 4,0 and 4,8 fall into level 2 of BPO maturity (24,0% companies from the sample).

Companies with BPO value between 4,9 and 5,6 fall into level 3 of BPO maturity (36,0% companies from the sample). Companies with BPO value between 5,7 and 7,0 fall into level 4 of BPO maturity (18,4% companies from the sample).

Frequency of the companies in the sample by BPO maturity is shown in Fig. 3.

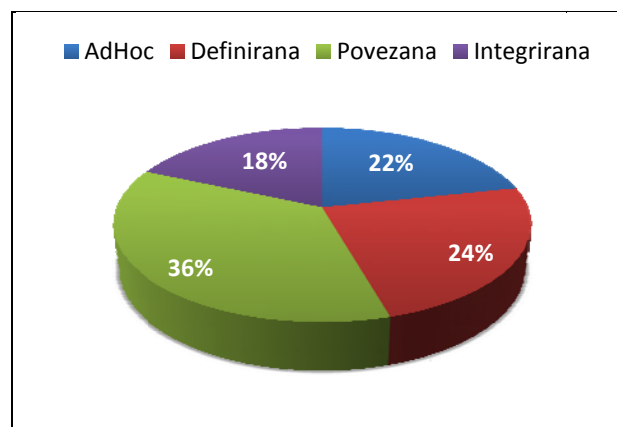


Fig. 3 Frequency of companies in the sample by BPO maturity level  
(Source: Author's calculation)

Since the compound measure of the BPO is 4,84 it can be concluded that Croatian companies are between the Defined and Linked stage of BPO maturity. Companies with that kind of level of BPO maturity have well defined and documented processes, but don't realize that these business processes have to inter connect. In order to advance to the higher, linked level of BPO maturity managers of Croatian companies have to improve following BPO elements: information technology, process organizational culture, people management and process measurement and management. In the literature that elements are called key turning points. A key turning point is a component of BPM that stabilizes within an organization and leads to the next maturity level [7].

When establishing BPO it is very important to clearly define the roles and responsibilities of employees executing processes. In fact this turning point (people management) is one of the things that company must do, in order to reach the highest level of BPO. Usually when adopting process principles, companies expand the responsibilities of their employees thereby enabling them to perform more multidimensional tasks and take more decisions which can result in fewer handoffs and shorter process cycle. Clear definition of roles is key in this process and successful completion of this task is one (not the only one) of the conditions for reaching higher level of maturity.

Another turning point acting as a prerequisite for advancing from defined level to linked level lies in process measurement and management dimension. After company has defined its performance measures, defined target values and started measuring them it is very important to give feedback to its employees and keep them informed on the process efficiency and effectiveness. Only by having this information loop can employees readjust their work in accordance with target performance.

Next turning point is information technology. Companies have to use business process modeling tools in order to advance to the Linked stage of BPO maturity.

Final turning point that will be pointed out has been somewhat neglected in literature. Appropriate organizational culture is also important in adopting process paradigm.

Employees must understand and see the functioning of a company as a set of processes. Traditional functional mindset, where people see functional departments, organizational units and strong hierarchy and where turf wars are frequent and ubiquitous will hinder the development of process orientation and trap company at Defined level at best. Companies must therefore educate employees on benefits of BPO and get them to understand how new way of working will also be beneficial to them.

## VI. CONCLUSION

The main goal of this study was to determine the state of BPO adoption in Croatian companies. The data from the empirical study that has been subjected to relevant statistical techniques has shown that the Croatian companies are between the level 2 and level 3 of BPO maturity.

The contribution of this paper is two-fold:

First BPO elements were systemized and analyzed in order to propose BPO construct and its constituting elements. This BPO construct can serve managers as a road map of specific steps that will lead to the BPM maturation of that specific enterprise. Companies will continue looking for new strategies for survival in tough times. Therefore, BPM must evolve from a mere methodology into a holistic management discipline that takes an integrated approach to the organization and its business as a whole.

Second, the empirical results of this research outline the most prominent issues and challenges faced by companies that have made the choice to implement BPM. Hence, these results have many practical implications for managers of the Croatian companies. They need to examine their current managerial practices, use of information technology, organizational culture and communication, and measurement practice. According to the results of the survey, it is of a great importance for the Croatian companies to increase the efforts in stimulating these four turning points in order to advance to the higher level of BPO maturity.

## REFERENCES

- [1] Bosilj Vukšić V., Milanović Lj., Škrinjar R., Indihar Štemberger M. (2008), *Organizational Performance Measures for Business Process Management: a Performance Measurement Guideline*, IEEE computer society, ISBN 978-0-7695-3114-4.
- [2] Garson, D. (2012), *Testing statistical assumptions*, North Carolina: Statistical associates Publishing
- [3] Hernaus T., Pejić Bach M., Bosilj Vukšić, V. (2012), *Influence of strategic approach to BPM on financial and non-financial performance*, Baltic Journal of Management, 7(4), 376-396.
- [4] Khan R. (2003.), *Business Process Management: a practical guide*, Tampa: Meghan-Kiffer Press
- [5] Kohlbacher M., Gruenwald S. (2011), *Process orientation: conceptualization and measurement*, Performance measurement system design, International Journal of Operations and Production Management, 25(2), 267-283.
- [6] Lee R., Dale B. (1998), *Business process management: a review and evaluation*, Business Process Management Journal, 4(3), 214-225.
- [7] McCormack, K. et al. (2009), *A global investigation of key turning points in business process maturity*, Business Process Management Journal, 15(5), 792-815
- [8] McCormack, K., Johnson, W. C. (2001), *Business Process Orientation: Gaining the E-Business Competitive Advantage*, New York: St. Lucie Press.
- [9] Milanović, Ljubica (2011), *Understanding Process Performance Measurement Systems*, Business Systems Research Journal, 2 (2011), 2; 25-39.
- [10] Neely, A. (2007), *Business Performance Measurement*, Cambridge: Cambridge University Press.
- [11] Škrinjar R, Bosilj Vukšić V., Indihar Štemberger M. (2010), *Adoption of Business Process Orientation Practices: Slovenian and Croatian Survey*, Business Systems Research, 1(1-2), 5-20.
- [12] Škrinjar, R., Hernaus, T., Indihar Štemberger, M. (2008), *Stanje procesne usmjerenosti in ključni zivizivaprihodnost v Sloveniji in na Hrvaškem*, Uporabna informatika, 16(4), 210-218.
- [13] Škrinjar, R., Indihar Štemberger, M., Hernaus, T. (2007), *The impact of business process orientation on organizational performance*, Proceedings of the 2007 Informing Science and IT Education Joint Conference.
- [14] Vlahović, N., Milanović, Lj., Škrinjar, R. (2010). *Turning Points in Business Process Orientation Maturity Model: An East European Survey*, WSEAS transactions on business and economics, 7, 22-32.
- [15] Zairi M. (1997), *Business process management: a boundaryless approach to modern competitiveness*, Business Process Management Journal, 3(1), 68-80.