

## **Organisational Commitment: Changes, Choices and Trends**

Sohnia Salman\*, Irfan Butt\*\* and Sumaira Hamid\*

*Lahore School of Economics, Lahore, Pakistan\**

*Lakehead University, Canada \*\**

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**Abstract:** This Research is based on a systematic literature review on evolution and development of organisational commitment methodologies and the changing trends of publications in organisational commitment literature in two different time periods, across various regions. A total of 242 empirical quantitative and mixed method articles published between 1978-2016 have been reviewed and analysed based on the research methodologies employed i.e. research design, sampling methods, data collection method, sample size, respondent industries, respondent country, respondent categories and statistical procedures across two different time periods. The publication trends are discussed in terms of most productive authors, top journals, authorship type, collaboration and most productive universities across different regions. An effort is made to bridge the gaps of previous works and identify future opportunities for research on commitment. There is a lack of systematic in depth literature on organisational commitment. The current study is a comprehensive integrative review of OC methodologies in use and the publication trends with the use of advanced cross tabs, based on a larger sample size, a greater time span(38 years) and a larger number of journals relative to the previous works.

**Keywords:** *Integrative Review, Methodological Trends, Publication Trends, Organisational commitment*

### **Introduction**

Over the years, academicians and practitioners have pondered on differing methodologies that are germane to the measurement of an organisational commitment (OC) of employees. According to (Benjamin and David, 2012, p 93), organisational commitment is defined as an employee's loyalty, their intent to stay and submission to an organisation's vision. OC is the overall forte of person's identification and the involvement with the organisation (Porter, 1974). (Caldwell et al., 1990) define organisational commitment as "an individual's psychological bond to the organisation, including a sense of job involvement, loyalty and belief in the values of the organisation".

Employee's commitment to an organisation constitutes an integral component of a company's success. The extant literature provides compelling evidence that committed employees wield more creativity and innovation in their work attitude, which is imperative for an overall productivity of an organisation (Camilleri and Van Der Heijden, 2007). As a result, organisations are adamant in retaining a committed workforce to achieve their objectives; however, only few organisations capitalize people resource strategically. A range of research has indicated a positive relationship between employee commitment and performance. According to Mowday (1998), OC leads to lower turnover and absenteeism.

Early research focused on defining the concept and current research continues to examine organisational commitment through two popular approaches, commitment-related attitudes and commitment-related behaviours. The concept of organisational commitment originated from the side bet theory of Becker in 1960. In 1974, Porter proposed affective dependence theory followed by Allen and Meyer (1984, 1990) multidimensional model of organisational commitment and Mowday (1998) showing organisational commitment as a relative strength of

an individual's identification with and involvement in a particular organisation. Based on the type of employer-employee bond, Meyer and Allen (1997) proposed a three-component model (TCM) which categorizes organisational commitment as affective commitment, continuance commitment and normative commitment. These feelings of obligation cause them to stay loyal to that firm.

Though organisational commitment has been extensively explored in past studies, there is no comprehensive and integrative review in recent times that thoroughly amalgamate methodological and publication trends on organisational commitment. The most recent review was presented by Iqbal et al. (2012) which was limited to only two journals and also lacked a systematic review of methodological and publication trend. In contrast, the focus of this research is to extract varying processes and methodologies in detail. A more comprehensive, integrative and updated literature review has been done and an attempt has been made to provide the readers with 36 years of accumulated literature on organisational commitment. Furthermore, this study is an attempt to bridge the knowledge gap and provide a systematic review to assess, synthesize and aggregate research in order to provide an objective summary on organisational commitment of employees. In particular, this systematic review attempts to answer the following questions:

*What is the importance of organisational commitment, in literature, as a variable?*

*What are the methodological trends that have been employed to measure OC?*

*What are the publication trends of journals for different aspects of OC?*

## **Literature Review**

The objective of this section is to provide an overview of literature in this area. Since our study is a literature review, we will discuss the previous literature reviews in this field to underscore the difference between our study and existing literature. Based on our search, the most recent integrative literature review was published in 2012 (Iqbal et al.). Therefore, we will first synthesize literature, a large number of studies, written since 2012 and then we will comment on earlier literature reviews in this field.

There has been a proliferation of OC literature in last five years. Some of the major constructs frequently examined in OC literature in last five years include job satisfaction (Asrar-ul-Haq et al., 2017; Law and Guo, 2016; Shila and Sevilla, 2015; Ishaq and Khalid, 2014; Susanty and Miradipta, 2013; Huang et al., 2012), employee turnover (Bianchi, 2016; Dumitru et al., 2015; Brien et al., 2015; Bull et al., 2013; Hwang and Hopkins, 2012), transformational leadership (Chiang and Ling, 2016; Kim, 201; Pierro et al., 2013; Khasawneh et al., 2012), employee burnout (Voci et al, 2016; Bianchi, 2016) and work engagement (Sayadi, 2016; Cogaltay, 2015; Vecina et al., 2013).

Interestingly, the regional focus of research has shifted from North America to Asia and Middle East. However, Europeans have maintained some interest in this field and have conducted relatively more studies than North Americans have. In East Asia, a number of studies have been conducted in China and Taiwan while Pakistan and India were major sources of studies from South Asia. While Turkey and Iran contribute almost all the studies to Middle East region. Majority of the studies were conducted in healthcare sector, followed by hospitality, universities and schools. Normally company employees comprised the respondents for OC studies. Hospital nurses, university and school faculty/teachers, students, and staff were prominent among respondents. In some instances, police and army officers were also interviewed.

Notably, there are five major literature reviews (Randall, 1990; Mowday, 1998; Swailes, 2002; Weibo et al., 2010; Iqbal et al., 2012) in the field of OC. With the exception of Iqbal et al. (2012), the remaining literature reviews are qualitative literature reviews. Iqbal et al. (2012) has touched upon some elements of research design and publication trends in a systematic manner but unlike our study, the scope of Iqbal et al. (2012) is not as inclusive and comprehensive. Thus, our study is one of the first attempts to synthesize the OC literature

methodology and publications aspects. A comparison of our study with Iqbal et al. (2012) is presented in tabular form (Table 1) in methodology section. A brief commentary about five literature reviews is provided next.

Randall (1990) evaluated the relationship between OC and work outcomes in a meta-analysis and suggested that work outcomes like effort, coming to work on time and to be part of that organisation are most highly associated with OC. Measurement tools previously used in literature may not reveal the experiences of employees and their inner affiliation or bonding with that organisation. New researchers should also take into consideration this aspect to have a clear understanding of the concept commitment and its relation to employees.

Mowday (1998) reflected on the progress that had been made in OC literature over a period of 25 years by investigating if employee commitment was still an important concept to the organisations as it was 25 years earlier. He has also highlighted four pre-qualifiers of organisational commitment as personal characteristics, role-related characteristics, structural characteristics and work experience. Multiple other factors, which are linked to personality traits of a person, can affect commitment of that person with the organisation.

Swales (2002) examines classical approaches to define and measure OC. His research evaluates the bases, nature, form and outcomes of commitment. The behaviour and actions of employees can explain the extent of bond between employees and the organisation. It is important for an organisation to retain its loyal employees and increase organisational commitment. Most of the empirical researches were based on the factors affecting OC linked with multiple variables. Swales (2002) pointed out that the past research was mainly based on the assumption that the bond between employees and firms is the key factor effecting organisation commitment. His work explains that the extensive research in the field of HRM – Human Resource Management led the researchers think deeply upon classical measures of organisational commitment, which were primarily stationary. It is important to understand the basis and approaches according to which organisation commitment can be measured; these are iterated in Swales' work as attitudinal commitment, Continuance commitment, normative commitment & Behavioural commitment.

Weibo et al. (2010) critically reviewed various approaches to OC literature from the beginning of Becker theory (1960) till 2009 and argued that all approaches have contributed greatly towards a better understanding of organisational commitment for academicians and practitioners and re-conceptualization of OC.

Iqbal et al. (2012) presented a literature search on organisational commitment, which is an analysis of 46 papers published in journals taken from Wiley Online establishing the opinions and judgments about what has happened in the field of OC over past 15 years. The study (Iqbal et al., 2012) was limited to two journals only based on the keyword search limited to title only. The study did not review research methodologies in detail. It becomes apparent from the study (Iqbal et al., 2012) that from a manager's perspective, organisational commitment is the desire to have devoted staff for achieving high organisational performance. If an organisation does not value its employees, the discontent lowers the morale of employees and is likely to lower their commitment towards the organisation. However, it has been mentioned in many studies and is still unclear whether employee commitment matters to firms or not. Research studies differ in factors affecting organisational commitment and most of the studies have not used the same variables which means a lot of ambiguity is present in understanding the term and factors of Organisational commitment. The literature review makes it evident that no study in the past has evaluated research methodologies in OC literature with the similar scope and detail.

## **Methodology**

This study employs integrative literature review to analyse methodological and publication trends. According to Berelson (1971) "Content analysis is a research technique for the objective, systematic, and quantitative description of the manifest content of communication". Systematic literature reviews can be qualitative or quantitative depending on the topic of

research and the area of interest. In the current research, literature is reviewed for identifying publication trends, methodological trends and statistical techniques employed by the authors. Article selection, in particular, consisted of content emphasizing on the research design, methods and results of each published article of different journals. Table 1 provides a comparison of variables content analysed in this research in contrast to Iqbal et al. (2012).

*Table 1: Variables Content Analysed*

Variable	Current Paper	Iqbal et al. (2012)
Research Type – Qualitative	X	X
Research Type – Quantitative	X	X
Research Type – Empirical	X	X
Research Type – Conceptual	X	X
Research Design – Survey, model, experiments, simulations, etc.	X	X
Research Design – Sample size	X	
Research Design – Data Collection Method	X	
Research Design – Country of Data Collection	X	X
Research Design – Respondent type	X	
Research Design – Statistical techniques	X	
Research Design – Reliability and validity	X	
Research Design – Response rate	X	
Research Design – Sampling methods	X	
Research Design – Pre-test / pilot	X	
Research Design – Cross section/ longitudinal	X	
Research Design – Bias: common methods, non-response	X	
Research Design – Power analysis	X	
Research Design – Hypothesis testing	X	
Research Design – Industry Type	X	
Publication Trends – Authorship type – academics vs practitioners	X	
Publication Trends – Authorship collaborations by region	X	
Publication Trends – Authorship per study	X	X
Publication Trends – Publication by Author(s)	X	X
Publication Trends – Publication by year of publication	X	X
Publication Trends – By journals	X	X
Publication Trends – Most influential universities	X	X

### **Article Selection**

Literature on organisational commitment was searched on a popular database EBSCO with keyword “Organisational Commitment” in the ‘title’, ‘abstract’ and ‘full text’ search fields. The search returned a total of 292 studies covering a time span of 36 years: 1978 – 2016. Relevant articles were based on organisational commitment as a focal construct. From 292 articles, only those were further shortlisted for review that appeared in the scholarly peer reviewed journals.

### **Coding and Data Entry**

All the articles found relevant to the study were given a unique ID number which was kept same throughout the analysis. The very first step was classifying the articles as empirical and conceptual. Empirical research is based on primary data using deductive approach and conceptual studies rely on secondary data. The articles were further divided into quantitative, qualitative and mixed method. Relevance for this paper referred to empirical (primary data study), quantitative (proper statistical method used, analysed with results) or mixed method (starting with a qualitative study and used some proper quantitative technique for support) articles. So in total the researcher had five categories, empirical quantitative, empirical qualitative, empirical mixed method, conceptual quantitative, conceptual qualitative. After this division, studies that were empirical quantitative and empirical mixed method were only used for methodological trends in the study. The working definitions are taken from the research paper conducted by Chatha et al. (2015).

The time span taken was from 1978-2003 and 2004-2016. The reason for this division was to make the research comparable, as the articles included in the study were lesser in number in the earlier years as compared to after 1995. Methodological analysis and publication trends analysis including simple counts (frequency distribution) and cross tabulation was done according to two time spans (decades), region wise (North America (NA), Asia, Others (including Europe and Australia), and Collaboration (collaboration amongst researchers from different regions)).

### Analysis

The data in Microsoft Excel was tabulated and checked for errors using filters and sorting. The analysis started with simple frequency distributions. Simple cross-tabulations were conducted using regions and decades. The advanced cross-tabulations were performed between specific aspects of multiple variables to develop a deeper understanding of trends.

One researcher with extensive background in systematic literature reviews and content analysis supervised the process. The templates for data entry analysis were taken from earlier published studies (Chatha et al., 2015; Butt & Papadopoulos, 2007). The researchers met regularly to discuss issues arising during coding, data entry and analysis to ensure reliability of data. The co-researcher met on weekly basis to discuss and clarify and discrepancies in coding.

## RESULTS

The results of both methodological developments analysis and publication trends analysis are given in this section.

### Overview

An integrated quantitative review of methodologies of 242 articles on Organisational Commitment has been elaborated upon in this section.

*Table 2: Breakup of Research Articles*

Research Type	Quantitative	Qualitative	Mixed Method	Total
Empirical	190	3	10	203
Conceptual	18	21	0	39
Total	208	24	10	242

Looking at the mix of qualitative and quantitative research, which includes both empirical and conceptual, out of the total, 86% are quantitative, and 14% qualitative and only 4% are mixed method studies. Over time the trend of quantitative studies has increased slightly whereas the qualitative studies have decreased further and the mixed method design is being used almost the same over the years.

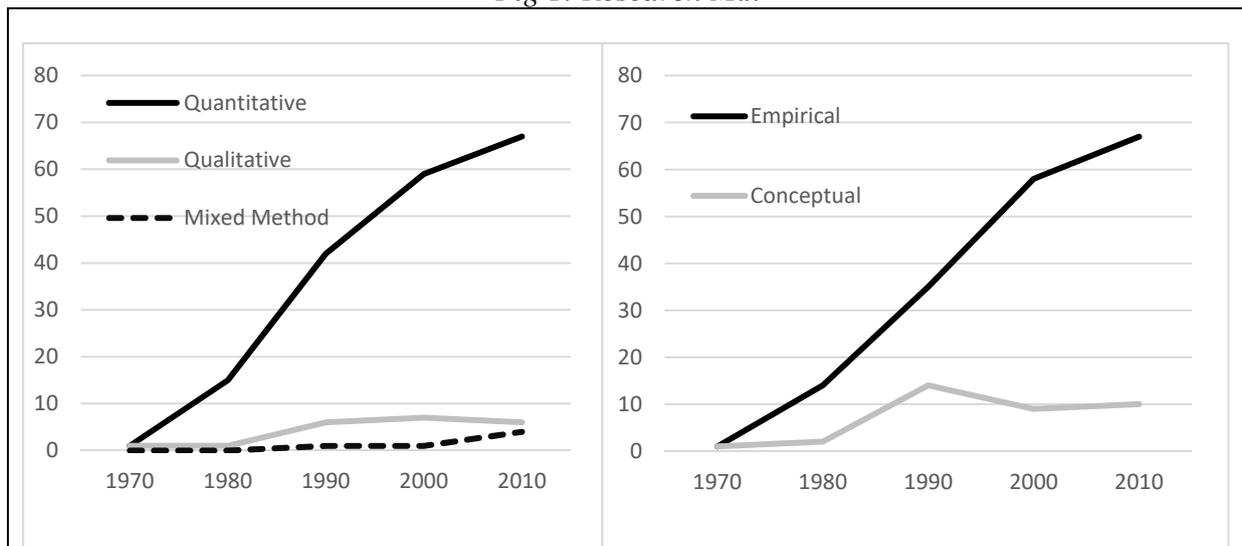
Table 3 shows the distribution of the total studies and the division of total mix of studies decade wise.

*Table 3: Research Type by Decade & Region*

Research Type	Total	1978-2003	2004-2016	NA	Asia	Others	Collaboration
Total Studies	242 100%	104 43%	138 57%	45%	27%	11%	17%
Empirical	203 84%	79 76%	124 90%	78%	94%	8%	88%
Conceptual	39 16%	25 24%	14 10%	22%	6%	2%	12%
Quantitative	208 86%	87 84%	121 88%	83%	89%	10%	88%
Qualitative	24 10%	15 14%	9 7%	13%	6%	1%	7%
Mixed Method	10 4%	2 2%	8 6%	5%	5%	0%	5%
EMP-Quantitative	190 79%	74 94%	116 94%	92%	95%	8%	92%
EMP-Qualitative	3 1%	3 4%	0 0%	2%	0%	0%	3%
EMP-Mixed Method	10 4%	2 3%	8 6%	6%	5%	3%	6%
Conceptual-Quantitative	18 7%	13 52%	5 36%	50%	0%	1%	60%
Conceptual-Qualitative	21 9%	12 48%	9 64%	50%	100%	1%	40%

The researchers are conducting more empirical quantitative studies and the trend has risen over the years whereas the already minimal number of conceptual quantitative studies have further fallen in the second period. The reason for this increasing empirical trend might be the faith in using first-hand and directly collected data using experiments or surveys rather than relying on secondary data collected by someone else. A declining trend of empirical qualitative studies is witnessed region-wise and decade wise. An overall decrease in the empirical research trend is revealed in NA, whereas there is a visible increase in research in Asia and collaboration and no change in other regions (Europe and Australia). Another interesting fact evident in the Asian research is the complete lack of empirical qualitative studies while in collaboration empirical qualitative percentage reduced to none in the 2004-2016 time periods. The decreasing trend in empirical qualitative studies might be due to the increased need of quantitative data to support qualitative theory (Abeyasekera, 2005).

*Fig 1: Research Mix*



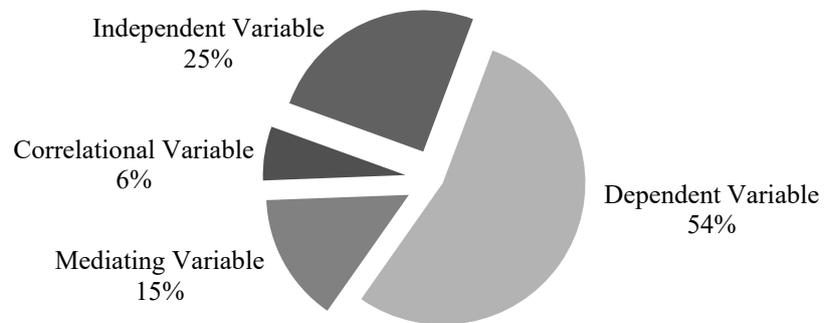
The focus of this paper is on empirical quantitative and empirical mixed method. Some interesting findings were revealed relevant to the rising and declining interest in this area. Declining trends from 2004-2016 to 1978-2003 (95% to 85%) in North America can be due to the maturity of the topic there, as it has already been researched thoroughly as compared to a relatively growing trend of research in Asia (80% to 96%) and Collaboration (89% to 93%). The North Americans initiated OC research, but now many Asian researchers specifically the Indian, Turkish, Taiwanese and Chinese researchers have shown a great interest in this area. Researchers who are driven by their interest in comprehending the empirical trends, Asian context presents a wide range of phenomena and problems that are distinctive or rare relative to other contexts (Leung et al., 2003). Mixed methods are only 4% of the total studies so the article will specifically focus on empirical quantitative number as 200 (190 Empirical quantitative and 10 mixed method studies).

### **Organisational Commitment as a Construct**

The importance of organisational commitment as a significant variable cannot be denied. Through this research, it was very clear that organisational commitment has been studied in almost every context by varying industries. It has been taken as a dependent variable, an independent variable as well as a mediating variable. If nothing else, many researchers have taken it as only a relational behaviour. The highest percentage has been attributed to organisational commitment as a dependent variable i.e. 54%, the independent variable - 25%, mediating - 15% and only as a relational variable - 6%. The nature, antecedents and consequences of OC have been researched since the last three decades. Researchers have taken it as a variable affecting performance (e.g. Meyer et al., 1989), turnover intentions (Cooper-Hakim & Viswesvaran, 2005), job satisfaction (Cooper-Hakim & Viswesvaran, 2005),

motivation (Mathieu & Zajac, 1990) and citizenship behaviours (Riketta, 2002) while the determinants include many, like personal characteristics (Mathieu & Zajac, 1990), job characteristics (Dunham et al., 1994) and perceptions of organisational justice (McFarlin & Sweeny, 1992). As a mediator, OC plays an important role in explaining the impact of organisational culture on employee involvement and performance. The figure 2 below provides a graphical depiction of use of OC as a variable.

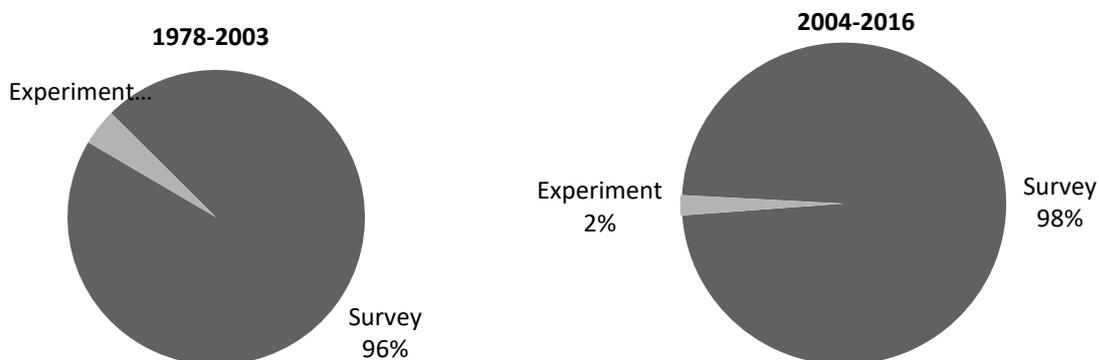
Fig 2: OC as a Variable



### Empirical Quantitative: Development in Methodologies

The most prominent research design evident in the literature was the survey as 96 % studies used a survey design in 1978-2003 and 98% in 2004-2016. None out of the total 200 studies has relied on the experimental method solely. Survey methods employs predefined and structured questions asked through self-administered questionnaires, mail, online and interviews. Fig 3 shows the research design trend, decade wise.

Fig 3: Research Design



Self-administered questionnaires and mail methods have been extensively used in the survey design. The use of self-administered methods decreased in NA and Collaboration and the weight was shifted to the mail method. Region wise trend (Table 4) showed a movement towards online and interview method in all regions in particular Asia and Collaboration. Online method was found to be the highest in Inter region Collaboration i.e. 13%. The online surveys facilitate large data collection over various regions by others rather than power organisations in the world (Couper, 2000). Online methods are also less expensive as compared to postal mail methods (Sheehan & Hoy, 1999; Weible & Wallace, 1998) and are becoming more common (Lazar & Preece, 1999).

Table 4: Data collection by Decade & Region

Data Collection	Total	NA		Asia		Others		Collaboration	
		1978-2003	2004-2016	1978-2003	2004-2016	1978-2003	2004-2016	1978-2003	2004-2016
Mail	102	47%	57%	55%	31%	42%	58%	38%	42%
Online	12	0%	7%	0%	7%	0%	0%	0%	13%
Self-Admin	94	53%	29%	45%	55%	29%	25%	63%	39%

Face to Face	12	0%	7%	0%	7%	0%	17%	0%	6%
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Table 5 shows the data collection trends from different countries over the two time spans. Researchers have collected data from various regions over time. The concentration of research on organisational commitment is witnessed in USA followed by India, China, Taiwan and Turkey.

*Table 5: Data Collection by Country*

<i>Respondent Countries</i>	<i>%</i>	<i>Respondent Countries</i>	<i>%</i>
United States	37%	Canada	4%
India	11%	Australia	4%
China	7%	Malaysia	4%
Taiwan	7%	Hong Kong	3%
United Kingdom	5%	Saudi Arabia	2%
Turkey	5%	France	2%
Pakistan	5%	South Korea	2%

The critical role of respondents in research cannot be emphasized more. Empirical quantitative studies of organisational commitment have focused on the opinions of general employees at the lower and middle levels of the hierarchy (50%), followed by professional managers (17%), students (10%), top management (10%), medical representatives (8%) and faculty members (6%). Table 4 shows an increase in sample of employees and medical representatives in Asia over the years. Generally, there is a decreasing trend towards the use of students and faculty. The collaborating regions as well as others (Europe and Australia) seemed to have shifted from professionals to medical representatives and general employees. So, the trend of using employees as respondents is generally increasing around the globe as the perceptions of the employees contribute immensely in understanding OC.

*Table 6: Respondent type by Decade & Region*

<i>Respondent Type</i>	<i>NA</i>		<i>Asia</i>		<i>Collaboration</i>		<i>Others</i>	
	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>
Employees	36%	52%	40%	51%	38%	68%	43%	71%
Students	16%	7%	20%	7%	13%	7%	14%	0%
Faculty	7%	3%	20%	14%	0%	4%	0%	7%
Professionals (Managers)	30%	29%	20%	9%	51%	11%	43%	7%
Medical Rep	12%	10%	0%	9%	0%	11%	0%	14%

The industries from where the data was collected have differed during the data collection process. There was a lot of variation in the type of organisations, which included banks, manufacturing firms, service organisations, health care, universities and IT firms. The percentages are the highest for service organisations 20%, universities 15% followed by manufacturing firms 13%. A variation was seen in the two time periods with respect to the movement from using a major chunk of manufacturing firms towards service organisations, which was missing in the early time period.

*Table 7: Data Collection by Industry*

<i>Respondent Industry</i>	<i>Total</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>
Service Organisations	20%	15	27	19%	20%
Universities	17%	11	25	14%	19%
Manufacturing Organisations	13%	14	13	18%	10%
Multiple Organisations	11%	10	13	13%	10%
Health Care	10%	10	11	13%	8%
Banks	7%	2	12	3%	9%
Accounting Firms	5%	7	3	9%	2%

IT firms	4%	0	8	0%	6%
SMEs	2%	1	4	1%	3%
Others	10%	9	12	11%	9%

There have been all types of sampling methods used in the OC research studies. The most prominent one is simple random sampling out of the probability sampling techniques followed by stratified and cluster sampling. The studies using non-probability sampling techniques employed convenience, judgment and snowball sampling.

The strength of the results is supported by the sample sizes taken in the respective studies. Over the years, the trend of small sample size of less than 100 has diminished. Researchers in NA and inter-region collaborations have completely stopped taking the sample of less than 100 compared to Asians who were found to be still using the sample size of less than 100. The trend of taking a sample of greater than 500 increased in NA from 20% to 23% compared with a decrease of the same sample size in Asia, Collaboration as well as others (Europe and Australia) over the years 2004-2016. The concentration for Asians, NA, Collaboration as well as others (Europe and Australia) was seen in sample sizes between 200 and 400 in 2004-2016. The highest response rate (27% of the total studies) was reported between 61% and 80%.

Interestingly, only 5% of the total studies have done a pre-test of the survey questionnaire while 11% have conducted a pilot compared to a large percentage whereas 85% are not reporting either. There has been only a small change in the pilot, which increased from 8% to 13% over time. No significant change was observed across regions. Similarly, 30% of the total studies have reported biases including the common method bias and non-response bias. Random biases are essentially present in almost all quantitative studies due to measurement precision or variation in the sampling method and these biases can be curtailed but cannot be evaded (Krishna et al., 2010). These method biases have a strong impact on validity of the results because they can create a problem as they a major source of measurement error and many researchers do not try to control these biases (Podsakoff et al., 2003). Some authors believe that common methods bias have an effect on the correlation estimates but do not invalidate the research findings (Glick et al., 1998). The Asians were the predominant in reporting the biases across the two time periods where there was none reported during 1978-2003.

*Table 8: Sample size by Decade & Region*

<i>Sample size</i>	<i>Total</i>	<i>NA</i>		<i>Asia</i>		<i>Others</i>		<i>Collaboration</i>	
		<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>
0-100	15	12%	0%	0%	11%	0%	0%	11%	0%
101-200	46	20%	17%	60%	25%	22%	7%	11%	19%
201-300	52	20%	27%	0%	25%	33%	27%	0%	35%
301-400	31	14%	17%	0%	14%	0%	13%	11%	12%
401-500	12	14%	17%	0%	14%	11%	27%	11%	12%
500 above	45	20%	23%	40%	11%	35%	27%	56%	23%

The cross-sectional studies have been consistently increasing across the OC research (from 72% to 91%) over the years compared to longitudinal studies, which suffered a major decline (from 28% to 9%).

*Table 9: Trend by Time Horizon*

<i>Time Horizon</i>	<i>1978-2003</i>	<i>2004-2014</i>
Cross sectional	72%	91%
Longitudinal	28%	9%

The number of studies, which specified hypothesis increased in the later time-period, between 2004 and 2014, and reporting of hypotheses increased from 75% to 92% in the later period. This shows an improvement in the quality of research as hypotheses express the clear purpose of the study.

The statistical techniques trend (table 10) shows that the use of advanced statistical techniques. In NA, Asia as well as collaboration, regression analysis, correlation analysis and factor analysis are the widely used statistical techniques. A small percentage of researchers have used Structural equation modelling (SEM) with a slight increase in 2004-2016. An overall improvement has been seen in Asia in the use of advanced techniques in 2004-2016 compared to 1978-2003. None of the publications in any region used descriptive statistics only.

The researchers across all regions over time have been ignoring the importance of power analysis. Only 12% of the studies have reported power analysis while 89% have not reported anything with respect to power analysis. Similarly, 82% of the studies on OC have not reported any missing observations while 18% have reported missing values and also removed them using list-wise deletion.

*Table 10: Major Statistical Techniques by Decade & Region*

<i>Techniques</i>	<i>NA</i>		<i>Asia</i>		<i>Collaboration</i>		<i>Others</i>	
	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>
ANOVA	4%	5%	0%	7%	4%	5%	5%	9%
EFA/CFA	18%	21%	23%	22%	25%	19%	19%	20%
Chi square	6%	7%	8%	2%	0%	3%	3%	5%
Correlation	29%	27%	38%	29%	33%	31%	31%	25%
Covariance	2%	1%	0%	1%	4%	0%	0%	0%
PCA	3%	0%	0%	3%	0%	2%	2%	5%
Regression	17%	19%	23%	23%	21%	21%	21%	23%
SEM	7%	6%	0%	6%	8%	8%	8%	7%
T-test	4%	0%	8%	2%	0%	1%	1%	0%
Others	7%	5%	0%	3%	4%	6%	6%	2%

The researchers working on OC and using the empirical quantitative methodology need to report reliability and validity tests. Reliability has been reported in 94% of the studies, majority being Cronbach alpha and only 4% have not reported it. Validity of the findings is not been given in 47% of the studies and the remaining 53% has been divided (Table 11).

*Table 11: Validity by Decade & Region*

<i>Validity</i>	<i>Total</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>NA</i>	<i>Asia</i>	<i>Others</i>	<i>Collaboration</i>
Discriminant	55	27%	19%	26%	18%	16%	27%
Convergent	33	20%	18%	24%	15%	22%	12%
Construct	18	1%	3%	3%	1%	4%	0%
Content	8	1%	5%	2%	4%	4%	5%
Validity - Others	14	5%	9%	5%	6%	5%	7%
Not given	114	46%	46%	40%	55%	50%	49%

#### *Advanced Cross Tabulations*

The cross tabulations were done between statistical techniques and sample size and other data categories like sampling methods, validity and reliability, pilot and pre-test and journal ratings. The cross tabulation carried out between sample size and techniques (Table 12) showed that the most of the studies using structural linear modelling are mostly based on a medium and large sample size of either between 100 and 300 or 500 above. Path analysis has been employed in the studies of the sample size of between 100 and 300, whereas the Hierarchical linear modelling (HLM) has been used in case of studies, mostly based on a sample of 500 above. Out of the total studies, a very small number of advanced statistical techniques like covariance structural analysis, cluster analysis and canonical correlation analysis have been used in a minimal number of three to five studies of a medium to large sample size between 200 and 500. This can due to the sensitivity of advanced statistical techniques to the sample sizes

required to get significant results (Siddiqui, 2013). A better trend of doing a pre-test or a pilot-test was revealed in the studies, which are using correlation, regression and confirmatory factor analysis.

*Table 12: Cross tab of Sampling Techniques with Sample Size*

<i>Techniques</i>	<i>Chi</i>								
	<i>ANOVA</i>	<i>square</i>	<i>Correlation</i>	<i>EFA/CFA</i>	<i>Path</i>	<i>PCA</i>	<i>Regression</i>	<i>SEM</i>	<i>T-test</i>
0-100	3	0	10	8	0	1	8	0	1
101-200	9	5	49	37	5	5	31	10	6
201-300	12	10	49	39	3	6	35	12	1
301-400	5	2	19	24	0	1	16	4	4
401-500	2	4	13	8	0	0	4	3	0
500 above	8	6	34	27	1	1	26	9	1

The cross tabulations carried out between statistical techniques used and the journal ratings (table 13) showed that major chunk of published studies in A rated journals most commonly use techniques like confirmatory factor analysis (20%) , regression analysis (20%), correlation analysis (29%) followed by SEM (6%) and ANOVA (4%). An interesting finding is seen in case of the journals not listed anywhere, as 9% studies have used SEM in such journals, relatively higher than either A, B or C rated journals.

*Table 13: Statistical Techniques by Journal Ratings (Source of Journal ratings: ABDC Journal List April 2016)*

<i>Statistical Techniques</i>	<i>Journal Rating</i>			
	<i>A</i>	<i>B</i>	<i>C</i>	<i>NL</i>
ANOVA	16	1	5	10
EFA/CFA	77	11	9	30
Chi square	17	5	2	3
Correlation Analysis	109	18	18	36
Path Analysis	6	1	1	1
Principal Component Analysis (PCA)	9	1	1	5
Regression Analysis	76	9	15	25
Structural Equation Modelling (SEM)	24	3	0	12
T-test	9	0	3	1
Others	37	5	4	6

### **Publication Trends**

This section of the paper elaborates on the outcomes of publication trend analysis in organisational commitment literature. Firstly, authorship analysis discloses the authorship type (academics or practitioners), level of collaboration in authorship, number of authors in each study and the most productive authors. Secondly, the most prolific universities in terms of number of papers by authors have been examined. Thirdly, the journal ratings of 242 papers are analysed.

#### *Authorship:*

With reference to the authorship type, it has been observed that a majority of articles i.e. 95% was written by academics, 5% were based on collaboration between academics and practitioners and practitioners wrote only 1% studies. Overall, in all regions, academics are dominant in studying and researching OC as compared to the practitioners whose contribution is only 2%, concentrated primarily in NA. In Asia, Europe, Australia and collaboration none of the authors were practitioners. The highest proportion of studies (12%) undertaken by academics and practitioners (both) was found in inter region collaborations.

In terms of collaboration between authors, it was found that some collaboration was there among authors of different regions as 41 studies were done in collaboration between NA,

Europe, Asia and Australia, where majority of collaboration was observed among the North Americans and the Asians. Authorship per study indicates an increasing trend where there are three or more authors specifically in NA and Asia where there is a considerable increase over time. Collaborative research incorporates difference of opinions, shared ideas and increased productivity (Allison et.al, 2008). Through collaboration, things that are accomplished are far more valuable compared to results obtained through working independently (Reither et al., 1989).

A declining trend is observed in single authorship in all regions. In case of inter region collaborations a major decrease is found in two author studies while three or four author working studies have gone up. Multiple authorship growth is also an indicator of increase in collaboration (Katz et al., 1995).

*Table 14: Authorship by Decade & Region*

<i>Authorship per study</i>	<i>NA</i>		<i>Asia</i>		<i>Others</i>		<i>Collaboration</i>	
	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>
1 Author	25%	6%	57%	42%	60%	36%	0%	0%
2 Author	53%	52%	43%	39%	17%	47%	70%	45%
3 Author	18%	33%	0%	15%	17%	17%	20%	32%
4 or more	4%	9%	0%	2%	6%	0%	10%	23%

Table 15 below shows most prolific authors based on our sample where Aaron Cohen and John Meyer have the highest number of articles, i.e. six studies each published in scholarly journals on OC as compared to rest of the authors. Rest of the authors had less than three appearances. Aaron Cohen is working as a head of MA program in public administration university of Haifa School of political Sciences. His skills and expertise are in quantitative research methods, Organisational commitment, Organisational Psychology, HRM, Multiculturalism, Applied Psychology, Leadership, Organisational culture. John Meyer is working as a full professor at The University of Western Ontario, Department of Psychology. His skills and expertise are in Psychology, Leadership, Change Management and HRM. Future researchers can follow the work of these authors to develop a better understanding of the field. The adjusted (weighted) appearance of the authors show Aaron Cohen to be on top followed by Donna Randall and rest are at less same position along the continuum.

*Table 15: Most prolific authors*

<i>N</i>	<i>Authors</i>	<i>Total Appearances</i>	<i>Adjusted Appearance</i>
1	Aaron Cohen	6	0.91
2	John P. Meyer	6	0.60
3	Russell E. Johnson	3	0.61
4	Olivier Herrbach	3	0.58
5	Natalie J. Allen	3	0.61
6	Donna M. Randall	3	0.75
7	James DeConinck	3	0.6

Note: Adjusted appearance = 1/number of authors in a study

#### *Universities:*

Table 16 depicts the universities, which are most involved based on total number of publications on OC. It was found that university of Iowa, The University of Western Ontario, and Texas A & M have the majority of research paper published on OC. All other universities appeared less than seven times. Top five universities with six or more publications are discussed. University of Iowa is in United States and was established in 1847. University of Western Ontario was established in 1878 and is located in Canada. Texas A&M University is a public research university in United States, which was established in 1876. It is the biggest university in Texas and fourth largest in USA. The Pennsylvania State University is also a research university in USA, which was founded in 1855. University of Jammu is research University in Kashmir.

*Table 16: Top Publishing Universities*

<i>N</i>	<i>Top Universities</i>	<i>Total Appearances</i>
1	University of Iowa	9
2	The University of Western Ontario	9
3	Texas A&M University	8
4	Pennsylvania State University	7
5	University of Jammu	6

**Journals**

The most preferred Journals among researchers are International Journal of Human Resource Management (11%), Journal of Organisational Behaviour (7%), and Journal of applied psychology (6%), Academy of Management Journal (5%), Journal of Business & Psychology (4%) and Journal of Business Ethics (4%). Together these six journals have the majority (37%) of the publications. Out of these Journal of Organisational Behaviour, Journal of applied psychology, Academy of Management Journal have A\* rating whereas the other three are A category.

*Table 17: Top Journals (Source Journal ratings: ABDC Journal List April 2016)*

<i>Journals (Highest Publications)</i>	<i>Number of studies</i>	<i>Publications % of Total</i>	<i>Rating</i>
International Journal of Human Resource Management	27	11%	A*
Journal of Organisational Behaviour	18	7%	A
Journal of Applied Psychology	15	6%	A*
Academy of Management Journal	11	5%	A*
Journal of Business & Psychology	10	4%	A
Journal of Business Ethics	9	4%	A

**Advanced Cross Tabulations**

A cross tabulation carried out between journal ratings, region wise and decade wise (table 18) showed a very interesting finding that in the earlier time period of 1978-2003 the NAs were publishing more studies in A rated journals as compared to Asians, Collaboration regions as well as others (Europeans and Australians). The number of publications in A rated journals decreased considerably for the NA whereas the Asian, Collaboration regions as well as others have begun to publish more in A as well as other journals.

Therefore, there has been an overall decrease in NA, which might be due to the maturity of the topic OC in that region. The increase in research studies on OC in Asia, collaboration and others might be due to the emphasis on research in these areas, which was not there earlier. Specifically Asians in general are more involved in research activities.

*Table 18: Cross tab between Journal ratings and Regions decade wise*

<i>Journal Ratings</i>	<i>NA</i>		<i>Asia</i>		<i>Others</i>		<i>Collaboration</i>	
	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>	<i>1978-2003</i>	<i>2004-2016</i>
A	39	14	2	19	5	16	7	35
B	6	2	1	3	1	3	2	6
C	4	0	1	10	1	2	2	12
NL	6	7	1	23	1	4	2	27

**Conclusion and Discussion**

The purpose of this research is to provide a comprehensive picture of OC research by imparting the results of a systematic literature review of 242 articles published in different peer-reviewed scholarly journals during 1978-2016 and to identify methodological trends, standards of rigor, and overall direction of the field over a period of 30 years.

The results of the analysis have been presented along various dimensions including methodologies being practiced in various regions using primary data, respondents and their countries, research designs, most productive authors, the top universities in terms of publications in OC research, top journals and their ratings, and the contexts in which OC has been applied in terms of a variable examined.

A large number and wide range of methods and approaches have been used in the empirical quantitative papers reviewed for this research paper. An interesting revelation in this paper was that though major bulk of total studies in OC have been carried out by academics in North America, the trend has declined over the years.

The trend of researchers working in collaboration is gradually increasing which is encouraging. Authors of one region are also collecting data from other regions so that there is diversity in the data collected as well as respondents. This needs to be strengthened more.

In the early years and the current times, the research in OC, as revealed in this study, has never been based on the mixed method approach. Authors are either using quantitative or qualitative approach rather than using a mix of both. Therefore, there is a need to pursue mixed method approach as well. Over the years, the trend of empirical studies has gone up compared to the conceptual ones.

There has been a general overall improvement in the sample size in all regions over years. The trend of using a smaller sample size is diminishing eventually and authors are basing their studies on larger sample sizes, which definitely give a boost to their confidence about the results. This is an encouraging sign as large sample sizes are required for the use of advanced statistical techniques.

Researchers have collected data from various regions over time. In the early years 1978-2003 most of the data collected was from NA, which was later reduced drastically in 2004-2016. Now this reduction in this region was then distributed over various countries where the most prominent were Asian countries like India, China, Turkey, Pakistan and Taiwan. This positive change can be attributed to collaboration between different regions, technological evolution and globalization, which has a very encouraging impact on the research quality in the latter time span which is based on different cultures, highlighting their demographics, socio-economic and political conditions.

In case of respondents, the researchers in Asia are focusing more on students and faculty members compared to general employees whereas it is quite the opposite in NA where there is a decreasing trend towards the use of students and faculty and an increase in employees. Increase in employees as respondents gives a general holistic perspective of the general public. Methodological triangulation is extensively seen in the current review. A large majority of studies have used triangulation in their paper, which is a very encouraging sign. This use of multiple statistical techniques helps to make research publishable and reliable. Researchers are now using techniques like SEM, canonical correlation, HLM, cluster analysis, covariance structural analysis which were not being extensively. Nevertheless, there is still a lack of multivariate analysis techniques, which should be relied upon to get a reliable, valid and publishable research paper.

Experimental method is not being used in OC research at all. There is a margin for improvement there. Longitudinal research over the years has decreased significantly but compared to other areas of management it is still acceptable. This decline might be because researchers do not consider it important to analyse the long-term behaviour in assessing OC, which should not be the case as OC can be observed best over time. To study the changes and stability in human behaviour, longitudinal research is essential (Featherman, 1979). There is a shift seen in the industry from manufacturing to service orientation.

Researcher's biases are also not taken into consideration as reporting of missing values and power analysis is minimal which should be assessed and outlined carefully. There are a very small number of studies pre-testing questionnaires, which needs to be emphasized, as the major

research design in OC is survey design based on questionnaires. Pilot studies are 11% of the total, which is a very small percentage.

Practitioners are hardly involved in OC research currently. A number of reasons can support this finding; firstly, the articles chosen for the analysis were published in those journals which are based on academics, thus there might be some bias based on sample which led to such findings. Secondly, we can say practitioners might not be that interested to study OC as a discipline and publish it in any related academic journal. Academic and practitioners are somehow working together in case of inter region collaborations. There is need for practitioners in the field to collaborate with academicians to include the reality aspects, which practitioners know better as they are involved in day-to-day operations of the organisations.

Since Iqbal et al. (2012) is the only study in the literature, which has some similarities with our work in terms of variables examined for methodological, and publication trends, we present a brief comparison of their findings with our study, only for those instances where definitions of variables are similar. Interestingly, the largest country for data collection for countries is the same, United States, with almost identical percentage of studies (37%). While other countries of data collection in Iqbal et al. (2012) are mostly Europeans, we found that data collection has shifted from Europe to Asian countries, such as China, India, Taiwan and Pakistan, etc. The articles for Iqbal et al. (2012) originated from two journals - Journal of Organisational Behaviour and Journal of Applied Psychology. Although, these two journal are dominant source of papers for our study as well, yet we found International Journal of Human Resource Management, Academy of Management Journal, Journal of Business & Psychology, and Journal of Business Ethics as significant contributor of research to OC. The number of authors per study were found to be similar to Iqbal et al (2012), with a decline witnessed in single author studies and two-author studies becoming the most dominant followed by three author studies. Iqbal et al. (2012) finding that University of Western Ontario (Canada) was the leading source of OC studies was corroborated by our studies. However, unlike Iqbal et al. (2012) we found University of Iowa, Texas A&M and Pennsylvania State universities are other major institutions contributing to OC research. In terms of most prolific authors, Iqbal et al. (2012) found Neil Conway, David Guest, Kate McKenzie and David Schoorman to be most prominent. Incidentally, none of them showed up in our listing of most prolific authors, which was led by Aaron Cohen and John Meyer. We concur that our definitions of empirical and conceptual studies (taken from literature) might be different from Iqbal et al. (2012); therefore, we do not compare limited number of methodology variables they have discussed in their study. The inspiration behind this review is to present an integrative and productive insight and trying to overcome the gaps in the literature currently available on OC and provide future research directions in this broad area. Almost all-important areas have been included in the OC research including manufacturing firms, Health care centres, service organisations, accounting and IT firms and universities. Organisational commitment term in itself is quite old but less conceptual work has been done so far. Committed human resources are the most valuable asset of an organisation. This work brings the focus towards HR and its development is the need of the present day as well as for future success.

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### Appendix: Working Definitions

Item	Working definition
Research design	Research design is considered as the overall blueprint for guiding a research project
Research methodology	Research methodology is considered as a set of tasks, phases, methods, and techniques that are used to carry out a research study

Empirical study	A study that uses primary data (first hand data collected by researchers of a study underway)
Conceptual	A study that uses secondary data (data borrowed from already published sources or hypothetical data)
Survey	Research design that uses survey questionnaire as an instrument to collect data
Model	Mathematical model based research design

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