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Employee Engagement

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Employee Total Productive Contribution:
A Powerful Source of Competitive Advantage

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IRC4HR was founded in 1926 as a non-profit organization designed to promote positive employment relationships and advances in human resources management through consulting, research, and education.

More than 90 years later, the organization continues to bring together employers, academics, and other stakeholder communities to fund action research and share insights on a wide range of topics, including a current focus on the implications of technology and digital disruption on the future of work, organizations, leadership, and the workforce.

Abstract

Among corporate management teams and business academics alike, it's a widely-accepted standard that employee engagement is key to an organization's success. For this reason, the past decade has produced companies—large and small—with a keen focus on increasing and supporting engagement.

And yet, while most business leaders understand the importance of engagement, and many have invested in efforts to increase it, current research suggests that fewer are successful in achieving it. According to 2017 national survey data reported by the Gallup Organization, only 33% of employees are 'actively engaged' while 51% are 'not engaged' and 16% are 'actively disengaged.'

> "Perhaps engagement is not enough.
> Perhaps the construct of how engagement is perceived,
> measured, and encouraged needs to broaden."

Employee Total Productive Contribution (ETPC) introduces a frame of reference for exploring a broader, multivariable explanation of the impact that employee engagement has on productivity and performance. ETPC posits that while employees might exhibit high levels of engagement, productivity could remain low due to such things as lack of ability, or to work that is not aligned to strategic goals. In other words, ***engagement is a necessary condition to achieve ETPC, but not a sufficient condition***.

Based on a combination of Human Resources Management (HRM) industry models and our recent survey research, we propose that ETPC is a function of multiple variables that work together in a synergistic manner to produce a result.

This paper presents important managerial implications flowing from a multi-dimensional view of employee engagement. The findings emerged from research conducted as part of the State of the Workplace Employment Relations Survey (SWERS), a multinational, cross-industry survey funded by Innovation Resource Center for Human Resources (IRC4HR®), the Social Science and Humanities Research Council of Canada (SSHRCC), and the Australian Research Council (ARC).

From Engagement to *Employee Total Productive Contribution*:
A Competitive Performance Advantage

BACKGROUND

The profession and science of management emerged in the 1880s and over the succeeding 130+ years the knowledge base has grown at an exponential rate—for example, an on-line search returned more than ten-thousand research articles alone on individual work performance. Much about managing people in organizations has been discovered and greatly improved but, in a few critical areas, progress has been slow and many companies continue to underperform. A case in point investigated in this study is employee work performance and, in particular, lack of engagement among a large part of the workforce. This report offers a new framework to help managers systematically think through sources of employee performance shortfall and ways to improve it. Also noteworthy is that the new framework, concepts, and measures are made concrete by filling them in with recently collected data from a nationally representative survey of 2000 US employees. The survey, State of the Workplace Employment Relations Survey (SWERS), was designed to 'take the pulse' of the employment relationship and explore the drivers of organization performance.

EMPLOYEE PERFORMANCE CONTRIBUTION: STARTING WITH ENGAGEMENT

Business leaders have long known that having a high-performing workforce is essential for growth and success. As noted in a report from Harvard Business Review Analytic Services, "A highly-engaged workforce can increase innovation, productivity, and bottom-line performance while reducing costs related to hiring and retention in highly competitive talent markets." While most leaders understand the importance of engagement, and many have invested in efforts to increase it, current research data suggest that fewer are successful in achieving it.

Peter Drucker, widely considered the father of modern management, wrote thirty-nine books on the subject of management and covered all aspects, such as strategy, organization, leadership, and social responsibility. Yet, when Drucker came to defining the essence of management and its number one strategic challenge, he picked out one particular factor—making the workforce as productive as possible. Drucker tells readers, for example (2008: xxxiv, emphasis in original):

> "There is as a consequence only one satisfactory definition of management, whether we talk of a business, a government agency, or a nonprofit organization: to make human resources productive. It will increasingly be the only way to gain competitive advantage."

Drucker is certainly not the first person to realize the importance of getting the maximum productive contribution from employees.

The central problem that exasperated engineer Frederick Taylor in the late 19th century was 'worker soldiering'—the deliberate restriction of effort and cooperation. Taylor estimated, for example, that employees give companies only 30%-40% of their maximum sustainable effort and he developed the new theory and practice of scientific management to obtain "the best initiative of every workman…., that is, their hard work, their good-will, and their ingenuity" (Taylor 1911: 33, 36). The term 'soldiering' soon went out of style but not the problem of effort and engagement itself for, evidently, it can make a very large difference in operating and bottom line results. Charles Myers, a leading business school writer on personnel and industrial relations in the 1950s, notes: "motivation of human resources has always been a frustrating problem" and the quest of management is to create a "favorable managerial environment which will release their [the workers'] energies, encourage self-motivation and self-development, and permit realization of individual as well as organizational goals" (Myers 1960: 5). In 2016, the Korn Ferry Institute issued a report suggestively titled *Charged Up* that leads with this statement: "But the truth is—and every CEO knows it—if an organization could harness just a fraction more of its people's Discretionary Energy, that would be a game-changer."

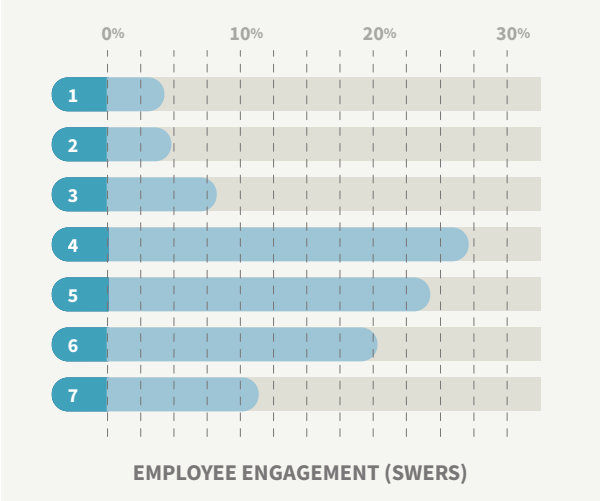
Today, *employee engagement* is the term most-used to describe what Taylor called 'initiative' and Korn Ferry calls 'charged up.' Different definitions and conceptualizations abound but the core idea is that employees voluntarily 'give their all' in performing their jobs and helping make the company successful. Engagement is thus a step beyond motivation and commitment for the latter two are positive mental states or dispositions signaling *willingness/desire* to provide effort, but engagement is demonstrated effort *in action*.

In a 2015 report from Bersin/Deloitte, executives ranked employee engagement as their #1 people management issue—not surprisingly given the huge shortfall in engagement that appears to exist in workplaces. According to 2017 national survey data reported by the Gallup Organization, only 33% of employees are 'actively engaged' while 51% are 'not engaged' and 16% are 'actively disengaged.'

> "If two-thirds of the workforce are indifferent or turned-off, this does not bode well for either productivity or competitive advantage; companies are paying for a large reservoir of employee talent, effort, and creativity that does not translate into better bottom line results."

One of the employee/HR management issues included in the SWERS survey is employee engagement, so we have additional evidence on how it varies across companies. A key difference, however, is that most surveys ask *managers* to rate the engagement of their employees while SWERS asked *employees* to self-rate their engagement and that of the people with whom they work. In addition, the SWERS uses a 1-7 scale (1 = lowest, 7 = highest) unlike some other surveys, (e.g., Gallup uses three broad categories) and thus gives a more finely-grained picture of engagement levels.

Figure 1



Shown in Figure 1 is a bar chart that depicts the level of engagement on the 1-7 scale as reported by the 2000 US employees in SWERS. The largest response category was the 4-level score, indicating a middle-level, relatively neutral assessment of engagement; neither particularly turned on or turned off. The SWERS data find that roughly one-third of employees give a 'highly engaged' score of 6-7 while a little more than ten percent give a 'highly disengaged' score of 1-2.

FROM ENGAGEMENT TO ABILITY-MOTIVATION-OPPORTUNITY (AMO)

More engaged employees are a plus for companies but high engagement by itself may not—and probably is not—enough. We know this from company field studies and laboratory experiments in which industrial psychologists and human performance technologists use scientific control procedures to identify the causes of individual differences in work performance among people doing similar jobs. Among the large and diverse set of factors, three have gradually risen to the top of the list as generic performance determinants across all types of jobs, occupations, and companies. In the Human Resources Management (HRM) field they are commonly labeled Ability, Motivation, and Opportunity (AMO) and are expressed in equation form as P = f(A,M,O)—stating that individual work performance (P) is a positive function of the employee's ability, motivation, and opportunity to contribute.

Sometimes writers use different labels for one or more of the variables, such as Capability or Incentives or Empowerment, but the basic ideas are the same and, indeed, sufficiently well accepted that some management writers refer to AMO as simply 'the performance equation.' To emphasize the key point being made in this report—which is that employee performance contribution is multi-dimensional and extends well beyond engagement, we initially refer to the outcome variable in the AMO equation as performance (P) but later replace it with the more apt term Employee Total Productive Contribution (ETPC). We hope the reader will appreciate by the end of this report that the new name is more than cosmetic and signifies a real shift in perspective.

The engagement variable discussed in the previous section is approximated in the P = f(A,M,O) equation by the second variable, Motivation. That is, a very motivated employee, like a highly-engaged employee, is highly energized and will go all-out in pursuit of a goal. The message of the performance equation, however, is that while high motivation/engagement is a definite plus it needs to be accompanied by two other factors to really have a large impact on the company.

The first variable in the equation is Ability, including personal attributes like body size, intelligence, health, and personality, and knowledge, skills, and abilities (human capital) acquired through genes, education, training, and experience. Motivation represents *will do* and Ability represents *can do*.

The third variable is Opportunity, meaning the employee not only *can do* and *will do* but is also *enabled/empowered to do*. Attributes of Opportunity include broadly defined job roles and responsibilities, managers who encourage self-initiative and don't micro-supervise, and channels for employees to make a difference through participation and voice. The implication is that work performance is determined by a combination of three factors, one of which is motivation/engagement but the other two are an employee's ability and opportunity to contribute.

The AMO model is one link, albeit a critical link, in the entire process of human resource management (Paauwe, Guest, and Wright 2013). This idea is illustrated below in the five-step model, with M (motivation) still used at this early point (to remain consistent with the AMO terminology) but then later replaced by the more action-oriented term E (engagement). A firm designs the HRM system to fit its business strategy and help reach operational and financial goals. The HRM system, through an appropriate mix and implementation of programs by HR staff and line managers, such as selection, training, compensation, appraisal and supervision, influences employees' AMO. Employees' AMO, in turn, affects their work behaviors, such as effort, teamwork and attendance, which contributes to organizational performance.

There is more to the AMO model, however, than simply adding ability and opportunity to motivation/engagement. For example, the model tells us that performance goes up with more ability, motivation, and opportunity, but in exactly what form and by how much?

One possibility is an *additive* form of the equation: P = A + M + O. Another possibility is multiplicative: P = A x M x O. In the additive form, A, M, and O are separate influences on performance so an increase in one has no effect on the others (i.e., no synergy or interaction) and the effect on performance is limited to the change in that one variable. In the multiplicative form, a change in one variable causes a synergistic ripple-like change in the others with the result that the total change is a multiple of the initial change (the notion that the whole is greater than the sum of the parts).

As an example, assume a company changes its compensation program for production workers from a straight-time hourly wage to an individual and group incentive system. In the additive form, greater incentives cause worker motivation M to increase but, by assumption, the ability A and opportunity O variables are unaffected. In the multiplicative form, the increase in motivation M also leads to an increase in ability A as, say, the greater incentives lead workers to upgrade their skills and, also, an increase in opportunity O as more motivation, say, ripples into more active team participation and leadership.

Evidence suggests that for modest changes in any one of the variables, and particularly when none are either in the extreme ends of very high or low, the additive form explains well. However, for either relatively large changes in one of the variables, or when one or more are very high or low, the multiplicative version is better.

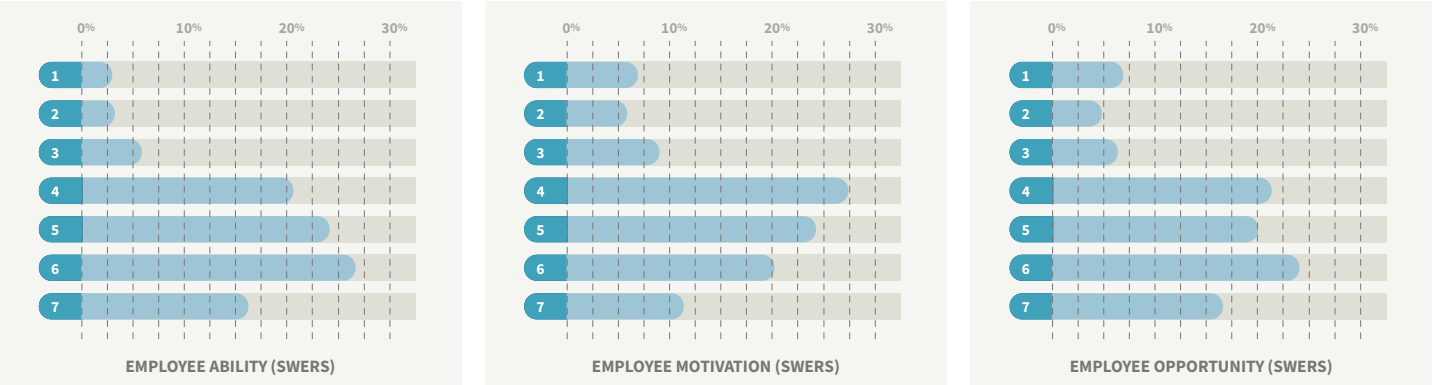
To illustrate, assume an employee has Ability = 0 for the job, such as a door guard at a hospital who is reassigned to be the chief brain surgeon. Further assume this person is highly motivated and given lots of opportunity to perform (e.g., M = 6, O = 6). In the additive form, performance is P = 0 + 6 + 6 = 12, which is modestly above average for brain surgeons based on the SWERS measures (maximum P = 7 + 7 + 7 = 21); but in multiplicative form, where the effect of one variable depends on the level of the others, P = 0 x 6 x 6 = 0 (not a good scenario for the patient).

With the multiplicative form, the process also works in the opposite direction with similar large-sized results from synergy. Assume, for example, that the door guard is replaced with a real brain surgeon who not only has high M and O but also high Ability, say a 6 level. In additive form, the performance equation is P = 6 + 6 + 6 = 18. Getting a highly competent and capable employee definitely improves job performance and, in this example, it rises close to maximum performance (21).

Now do the same calculations for the multiplicative form: P = 6 x 6 x 6 = 216! The implication is that when A, M, and O interact and synergistically affect each other, the *real* performance payoff for a company is not only when employees are engaged but *also* when their high engagement is combined with high ability and high opportunity. That is, job performance increases but modestly when employees have mediocre A, M, and O scores and management takes an HRM initiative that boosts *only one* of them. However, when employees have above-average A, M, and O and management increases *all three* in a balanced approach, both actual and potential job performance skyrocket (actual is 216, potential = 7 x 7 x 7 = 343).

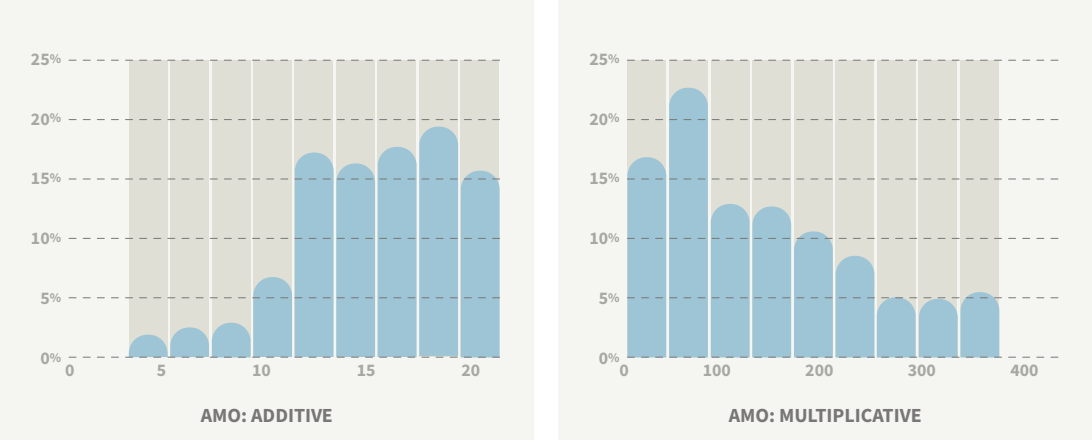
To drive home the point and illustrate the importance for managers, we have calculated the AMO performance equation using the values reported by the employee respondents in SWERS in both additive and multiplicative form. To begin, Figure 2 shows the distribution of reported levels for each of the Ability, Motivation, and Opportunity variables from SWERS. (See the table in the Appendix for exact wording of the questions).

Figure 2



Next, the three variables are combined into additive and multiplicative forms and the resulting performance scores are shown in the left-hand and right-hand diagrams in Figure 3. The central takeaways are, first, that the low-to-high range in *potential* employee performance is greatly magnified if the A,M,O factors interact in multiplicative form and, second, the low-to-high dispersion in actual performance outcomes is also much greater but, in addition, features a highly-skewed right-hand tail containing the relatively small number of *truly standout* organizations with exceptionally high workforce performance from very high levels of *all three* of the A,M, and O factors.

Figure 3



FROM AMO TO EMPLOYEE TOTAL PRODUCTIVE CONTRIBUTION (ETPC)

If employee engagement is a necessary but not sufficient condition for organizational performance, the same question may be asked of AMO. That is, assume the performance equation is P = f(A,M,O) and imagine a company is so well managed that the A, M, and O scores are the highest possible. Is it then safe to predict that the company will also achieve highest-possible organizational outcomes?

The answer is again no because there are *other variables* besides A, M, and O that affect individual work performance and company outcomes. To highlight this fact, the performance term (P) is from this point replaced by the more revealing and inclusive term *employee total productive contribution* (ETPC).

Many diverse factors affect employee work performance besides A,M,O but not all should be included in the performance equation. For example, financial measures of company performance, such as profits and sales, and the size of the AMO factors among the workers, are partly affected by variables outside management control, such as macroeconomic cycles, business regulation, and educational skills of the workforce. Since our focus is on what management can do to maximize employees' performance, these external factors are best taken out of the equation, thus limiting the coverage of the ETPC outcome variable to internal operational measures, such as productivity, product quality, and customer service, with the employee contribution factors in the equation also limited to worker-related factors that an HRM system can potentially influence.

Even with these limitations, it is evident there are still important missing variables in the employee performance equation. Two that quickly come to mind are, respectively, Cooperation (C) and Goal-Alignment (G). Employees may rate high on dimensions of can do, will do, and enabled to do and yet have low performance and productive contribution because either their cooperation with each other or management is low or, alternatively, the impact of their work efforts and capabilities is weakened because their activities do not align with higher-level organizational goals. For example, A,M,O may be high yet cooperation low if the culture stresses individual competition and achievement over team work and group success; similarly, goal alignment may be low if compensation, promotion, and appraisal incent employees in the wrong direction, such as over-emphasis on short-term sales or cost containment at the expense of product quality and retention of key talent.

The list of additional employee performance variables to put in the equation is potentially quite large, such as quantity/quality of management and job-related resources, but at some point the model becomes too complex and difficult to operationalize. Part of management's job, therefore, is to focus ETPC analysis on only the most strategically important 'must-have' contribution factors and put to the side the remaining ones. The exact list will differ across companies and employee groups but the five factors identified here are generic across companies and critical to obtaining employees' full productive contribution.

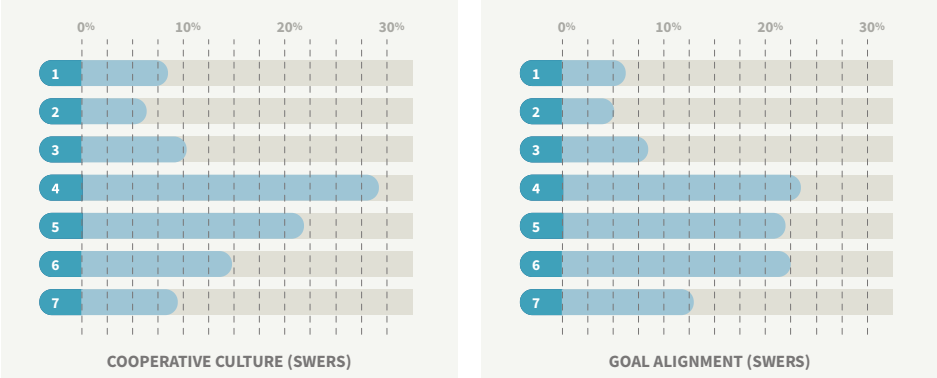
The full performance equation is written below, but with engagement (E) now substituted for motivation (M) since it represents the more general and action-oriented concept:

ETPC = f(A, E, O, C, G) with A = Ability, E = Engagement, O = Opportunity, C = Cooperation, and G = Goal-Alignment

EMPLOYEE TOTAL PRODUCTIVE CONTRIBUTION (ETPC)								
ABILITY	X	**ENGAGEMENT (MOTIVATION)**	X	**OPPORTUNITY**	X	**COOPERATION**	X	**GOAL-ALIGNMENT**
the employees' demonstrated knowledge, skills, and abilities		the employees' demonstrated energy, creativity, and discretionary effort		the space given to employees for self-direction, autonomy, and involvement in job tasks and operational decision-making		the level at which employees and managers are working together for a common purpose		the degree to which employees' engagement and cooperation are effectively directed toward organizational goals

Shown in Figure 4 are separate plots from SWERS data of employees' responses (same 1-7 scale) to the two questions in the survey that best capture the ideas of organizational cooperation culture and goal alignment (See the table in the Appendix for exact wording of the questions). As with the other three performance factors, the data plots show that companies fall along a low-to-high distribution for both cooperation (measured by degree of partnership culture in the organization) and management's success at getting employees aligned with organizational goals, although with concentrations in the 5 and 6 levels.

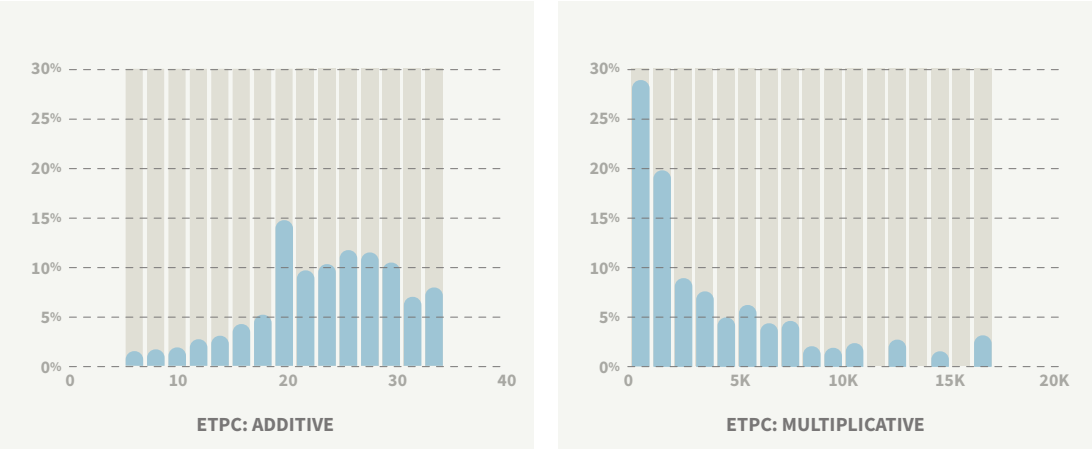
Figure 4



Not only do managers need to consider the combination of A, E, O, C, and G variables as they evaluate intervention actions to improve ETPC, they also need to consider the degree to which the five variables are, respectively, independent sources of contribution versus interactive/synergistic contributors. If the former, the performance equation can be specified in additive terms, ETPC = A + E + O + C + G, but if the latter then in multiplicative form, ETPC = A x E x O x C x G.

Figure 5 shows the ETPC scores using the full set of five variables from SWERS but in additive form in the left-side diagram and multiplicative form in the right-side diagram. The end points for the horizontal axis in both diagrams are set at the maximum potential value for each version of ETPC (Potential = 7 + 7 + 7+ 7 + 7 = 35 in additive form, Potential = 7 x 7 x 7 x 7 x 7 = 16,807 in multiplicative form).

Figure 5



When the five employee contribution variables are independent of each other, an insight of this model is that the lowest-to-highest spread in potential employee performance contributions is much compressed relative to the case where the five variables fully interact so one amplifies the size of the others. On one hand, the compressed range of ETPC with an additive function is a welcome feature for companies that score low on one or several of the five variables because the downside damage to organizational performance is greatly reduced relative to the multiplicative function and expansive ETPC range. But, on the other, the compressed ETPC range also means there are much smaller upside gains from effective employee/HR management while with the multiplicative model the same 'great place to work' companies can potentially reap extraordinarily large and enduring performance results if, with high values for all five variables, they locate in the highly-skewed right-hand tail of the distribution.

MANAGERIAL IMPLICATIONS

This more holistic view of engagement and the ETPC multiplicative framework suggest five important implications for organizations and managers:

1. First, organizations may underestimate the ROI from investments in employee engagement—and the other four parts of ETPC—because the positive effects ripple through multiple complex and often difficult-to-measure channels. Every experienced executive/manager knows this from hands-on experience, but it can be difficult to quantify and to make a case for additional investment. The ETPC multiplicative equation backs up intuition and personal experience with an ***analytical*** presentation of the "how and why" of the process of increasing the ever-elusive target of high employee engagement.

2. Second, the ETPC equation provides deeper insight into why companies find it so difficult to build a top-tier high-performance work system and culture. Firms must skillfully manage all five parts of ETPC, so that not only is each component taken to a high level, but the components also must then work together to ***create maximum synergy***.

3. Third, this framework gives insight into why the last two to three decades of greater market ***competition and turbulence*** have made it more difficult for companies to sustain a high-ETPC workplace. Greater market competition and turbulence, along with periodic business downturns and even financial crises, force companies to take actions that frequently undercut all five variables in ETPC, such as downsizings and layoffs, reduced job security and benefits, and a shift from full-time/regular contract employment to part-time and contingent employment. It is difficult to get employees engaged, aligned, and eager to cooperate under these conditions.

4. Fourth, insight is given into why organizations have a ***strong financial incentive*** to be among the small number of those that, through skillful management, long-term investment, and mutual-gains philosophy, successfully create and sustain a high-level ETPC organization. Raising scores on all five ETPC variables not only dramatically increases total ETPC but also on productivity and profits. Thus, it is progressively more difficult for rivals to compete because only the very best and committed managements achieve high ETPC.

5. Fifth, and finally, this framework alerts companies to the consequences of serious under-performance in any one of the five ETPC determinants. Just as an increase in engagement creates an amplified boost in performance through the interactive effect with the other four variables, so, too, does the effect work in the downward direction. If alignment or cooperation deteriorates — even if engagement remains at a high level—the total ETPC score for the workplace will drop sharply. Understanding the ***interactive*** and ***interdependent*** nature of these determinants makes it clear that while employee engagement is important to productivity and performance, it is not sufficient.

CONCLUSION

The perpetual challenge faced by management is to get the maximum of work effort from employees and effectively harness it to accomplish organizational goals. Not surprisingly, considerable attention has been given in recent years to stimulating and maintaining employee engagement at work. Accomplishing the engagement challenge is a difficult management task all by itself, particularly as the market environment becomes more turbulent and driven by short-term financial pressures.

By moving beyond the currently accepted concept of engagement to the Employee Total Productive Contribution or ETPC framework, employers can realize significant payoff.

Key takeaways:

- ETPC is a multiplicative product of five critical employee productivity determinants: **ability, engagement, opportunity, cooperation, and alignment**.
- **Engagement is a necessary but not sufficient condition to win the competitive game**. There are multiple 'levers' that organizations can—and must—move to drive increases in employee productivity and contribution.
- These extra dimensions of high-level employee performance increase the difficulty and complexity of management by several orders of magnitude. However, **even modest improvements across the relevant variables can have a disproportionate impact on results when there is synergy among the variables**.
- Engagement must be combined with other best-management practices to fully exploit productivity and performance complementarities and synergies. **Organizations able to accomplish this synergy appear to be in a select group**, based on SWERS data.
- Because it is so difficult to successfully put together a winning combination of engagement, talent, team work, and synergy, **the potential payoff in profit and competitive advantage is correspondingly large**.

FUTURE STUDIES

The survey data demonstrate that there is a large dispersion of companies in the U.S. economy based on ETPC scores. The follow-on hypothesis is that a low-middle-high location in the ETPC distribution is causally linked to a low-middle-high score on productivity and profit. We examine this question in a future report on the State of the Workplace Employment Relations Survey (SWERS).

ABOUT THE RESEARCH: STATE OF THE WORKPLACE EMPLOYMENT RELATIONS SURVEY (SWERS)

The ideas in this report are based on research and data from the State of the Workplace Employment Relations Survey (SWERS).

The SWERS study was undertaken by researchers from Griffith University, Georgia State University, and the University of Toronto and was conducted with funding from Innovation Resource Center for Human Resources (IRC4HR®), the Social Science and Humanities Research Council of Canada (SSHRCC), and the Australian Research Council (ARC).

Methodology. The survey data were collected on-line over a four-week period ending in January 2016. Two surveys—one for employees and one for employers—were completed by nationally representative samples of employees and employers, which were pre-selected and managed by Opinion Research Corporation (ORC), a global leader in this kind of survey research.

	Number of employee respondents		Number of employer respondents (input from upper-level managers and executives)	
	Quota	Actual	Quota	Actual
United States	2,000	2,050	500	501
United Kingdom	2,000	2,051	400	415
Canada	1,100	1,100	200	200
Australia	2,000	1,996	400	400

The survey was designed to explore a broad view of the employment relationship, including a workplace report card and questions on topics such as management style, culture, voice and representation, communications, performance measures, perspectives on free markets, and competitive positioning. Several academic papers that include statistical analyses and more extensive survey findings by demographic variables and workplace 'drivers' are in various stages of publication.

The data referenced in this ETPC paper come from approximately 2,000 U.S. employee respondents.

Ratings of ETPC dimensions. Employee survey respondents were asked to rate the item associated with each ETPC performance category (ability, engagement, opportunity, cooperation, goal alignment) on an agreement scale of 1 to 7, with 1 indicating an absence of this characteristic in their current workplace (strongly disagree), and 7 indicating a strong presence (strongly agree). The items that were used to calculate the ETPC include:

ETPC Dimension	Survey Question
Ability	Overall, the employees at my unit/workplace are a great performing 'first class' team of workers.
Engagement	Employees at my unit/workplace give all of their hearts, minds, and efforts.
Opportunity	Managers I am familiar with are great at empowering and trusting employees to get their jobs done with minimum oversight and direction.
Cooperation	My unit/workplace's culture is characterized by a strong family/partnership feeling.
Goal-alignment	Managers I am familiar with do a great job in getting employees knowledgeable about, focused on, and working toward the company's/organization's goals and objectives.

ABOUT THE AUTHORS

Bruce E. Kaufman is Alumni Distinguished Professor of Economics in the Andrew Young School of Policy Studies at Georgia State University (Atlanta USA). His main area of research covers cross-disciplinary dimensions of the employment relationship, including labor economics, human resource management, industrial relations, labor and employment law, and business and labor history, with an emphasis on the institutional economics perspective.

Professor Kaufman has written or edited eighteen books and more than one hundred journal articles and chapters. Examples of books are: *Managing the Human Factor: The Early Years of Human Resource Management in American Industry* (2008) and *Models of Labor Markets* (forthcoming, 2018).

Jodi Starkman is Executive Director of Innovation Resource Center for Human Resources (IRC4HR). In this role, she supports the IRC4HR Board of Trustees and collaborates with industry thought leaders to explore topics for research and to ensure that grants and projects are structured and managed to achieve IRC4HR's grant-making objectives and mission.

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Michel Barry is Professor of Employment Relations in the Griffith University School of Business in Brisbane, Australia. Besides being a long-time chair of the department, he has published research on a variety of human resource and employment subjects, such as employee voice, employer associations, and international and comparative employment relations. His latest edited book is The Research Handbook of Employment Relations in Sports.

Adrian Wilkinson is Professor and Director of the Centre for Work, Organization, and Wellbeing in the Griffith University Business School in Brisbane, Australia. He has authored, coauthored, or edited thirty books and over 150 articles. He has been included in HR Magazine's list of most influential thinkers in international HR. His latest co-edited book is the Oxford Handbook of Management.

REFERENCES

Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). Manufacturing advantage: *Why high-performance work systems pay off.* Ithaca: Cornell University Press

Bailey, T. (1993) "Discretionary effort and the organization of work: employment participation and work reform since Hawthorne", Teachers College and Conservation of Human Resources, Columbia University, NY

Bersin, Josh, March 10, 2015. "Engagement, Talent and Culture Now the #1 Issues in Talent and HR." *The Business of Talent.* Oakland: Bersin by Deloitte.

Drucker, Peter. 2008. *Management Revised Edition.* New York: HarperCollins.

Gallup Organization. 2017. "State of the American Workplace". Washington: Gallup.

Harvard Business Review Analytic Services. 2013. "The Impact of Employee Engagement on Performance."

Korn Ferry Institute. October 4, 2016. "Charged Up."

Myers, Charles. 1960. "Lessons from Abroad for American Management." *Journal of Business,* 33(1): 1-9.

Paauwe, Jaap, Guest, David, and Patrick Wright. 2013. *HRM & Performance: Achievements & Challenges.* New York: Wiley.

Taylor, Frederick. 1911. *Principles of Scientific Management.* New York: Harper.

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