**On the positive effects of coffee on the productivity and happiness**

In the past decades, a lot of research has proved the positive effects of high-quality coffee on improving the employees' productivity and innovation in the workplace. Early in 1998, the paper [1] points out that the amenities in the office environment including the coffee machine, can greatly influence the employees' working attitudes, behaviors, satisfaction, and job performance. In a study on the employees' different attitudes towards HR practices and different levels of commitment [2], the authors mention that it is quite popular to install coffee machines in the workplace for the 19-21 age employees, and it has a positive impact on their commitment. In [3], empirical evidences are found to support the argument that coffee breaks within the workplace can help build a good group atmosphere, which is directly related to the productivity increase. In [4], a questionnaire on the relationship between smart office applications and enterprises' strategic values reveals that the employees' satisfaction and productivity are supported by multiple smart applications, including the smart coffee machine that brews personally preferred coffee variants. The paper [5] finds out that the employees who drink specialty coffee would have higher levels of happiness and engagement in the workplace. The paper [6] shows that an intake of 2–3 cups of coffee per day can improve people's cognitive function, including better attention and problem-solving ability. In a study conducted in public hospitals to investigate the female’s perceptions of diversity management [7], the authors argue that the coffee machine talks are one of the effective methods to raise the workplace happiness, recharge the staff’s energy, and enhance the emotional ties with the hospitals they work in. In [8], a study on the specialty coffee trend in Saudi Arabia shows how the specialty coffee on workplace coffee breaks benefits the employees' productivity, focus, and collaborative engagement.

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[2] E. Conway, and K. Monks, "Unravelling the complexities of high commitment: an employee-level analysis," Human Resource Management Journal, vol. 19, no. 2, pp. 140-158, 2019.

[3] B. N. Waber, D. Olguin Olguin, T Kim, and A. Pentland, "Productivity through coffee breaks: Changing social network by changing break structure," Social Science Research Network, 2010.

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[5] L. de Vasconcelos Teixeira, "The consumption of experiences in specialty coffee shops," Coffee Consumption and Industry Strategies in Brazil, pp. 275-295, 2020.

[6] M. S. Butt, and M. T. Sultan, "Coffee and its consumption: Benefits and risks," Critical Reviews in Food Science and Nutrition, vol. 51, no. 4, pp. 363-373, 2011.

[7] M. Mousa, H. K. Massoud, and R. M. Ayoubi, "Gender, diversity management perceptions, workplace happiness and organisational citizenship behaviour," Employee Relations: The International Journal, vol. 42, no. 6, pp. 1249-1269, 2020.

[8] K. A. Maspul, "Maximizing workplace efficiency and collaboration: The impact of coffee breaks on productivity and team dynamics," Jurnal DIALOGIKA: Manajemen dan Administrasi, vol. 3, no. 2, pp. 49-58, 2022.

**Cost and Profit of the smart coffee machines installed in the workplace**

It is worth noting that in references below, the estimated profits are mainly from selling coffees to the employees or customers, instead on from the increase of employees’ productivity and the customers’ satisfaction, although these factors are discussed. We speculate that the reason may lie in the difficulty of modeling the profits made from the factors.

<https://www.linkedin.com/pulse/roi-jura-coffee-machine-workplace-melinda-nuzzaco/>

This is a short report given by the marketing executive at JURA Australia Espresso Pty Ltd in 2019. By taking the large companies of 50 employees for example, it presents that the cost of a JURA coffee machine could pay for itself in less than 3 months and generate the business an extra $1,916 profit per month, by only charging $2 per coffee. This surplus can be re-invested to purchase operational supplies like fresh coffee beans and maintenance products. It can also save the cost of employees to take frequent coffee breaks and increase the morale and productivity amongst colleagues.

<https://coffeeseller.com/blogs/news/the-true-cost-of-a-commercial-office-coffee-machine>

This is a systematic study on the cost and profit of installing a coffee machine in the workplace. In this study, it is assumed

1. Each coffee drinker drinks about two cups of coffee per day.

2. Each month contains around four and a half weeks and 22 working days.

3. Each drink contains 8p worth of coffee beans.

4. Each drink contains 4p of milk, other ingredients and other supplies.

* Cost

The cost is grouped into four parts: 1) coffee machine rent, 2) beans, 3) milk, other ingredients and cleaning supplies, and 4) energy.

According to the estimation, for a cheaper machine, it will cost around £86 per month for machine leasing and energy costs plus around £5.30 per person per month depending on use, and for a larger machine like the Franke A800 Commercial Bean to Cup Machine, it will cost around £320 per month plus around £5.30 per person per month depending on use. As a result,

1. A small office with about 8 staff will cost approximately **£122.40** per month if everyone is a coffee drinker and they all have a couple of cups per day.

2. A large office with 100 people will need a larger machine with a faster rate of production. If they use the Franke A800 Commercial Bean to Cup Coffee Machine and everyone is a coffee drinker on two cups per day, it costs **£850** per month on the office coffee machine.

3. A serviced office with a high number of tenants may need to provide a higher quality service. A high-quality commercial bean to cup machine like the Franke A800 will meet the requirements. A serviced office with more than 300 people can expect to spend **£1,910** per month on running a commercial coffee machine.

* Profit

1. Basically, a small office with 8 members of staff would generate **£176** from the coffee machine if they charged just 50 pence per cup and all the other numbers stayed the same. With the same low price, a large office with 100 members of staff would generate **£2,200** while a serviced office could make **£6,600** from 300 tenants.

2. The caffeine in coffee can improve mental performance and alertness and can be a boost to office productivity.

3. Some research suggests that having three cups of coffee per day could lengthen lifespan, lowering the risk of several key conditions including heart disease, indicating that an office coffee machine could improve health outcomes for your staff.

4. Having a coffee machine on site also means that staff won’t be going off-site to grab a high-quality coffee from the local Starbucks, saving them money and keeping them around in case you need them.

5. The coffee machine can also act as a meeting point in your office, building emotional connections between staff and even acting as a high-tech replacement for the office water cooler.