

Manufacturing Management Practices in the Western Balkans



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Executive Summary

This project investigates the quality of **management practices in manufacturing plants in the Western Balkans**. In particular, we focus on **modern operations, quality of monitoring, target setting and incentive management skills** applied within manufacturing plants. Our goal was to assess and benchmark the management practices in the Western Balkans region¹ for which very limited information is available so far.

We evaluate management practices by defining the concept of “good” and “bad” management practices on a scale from **1 (worst practice) to 5 (best practice)** across key management practices used by organizations across different manufacturing sectors. We do this by using an innovative and rich study design that includes **a survey, qualitative interviews and secondary data**.

We provide practically **relevant findings** for policy makers, managers of manufacturing companies, as well as for industrial education and consultancy firms, who can **provide potential solutions to improve** the effectiveness of **management practices**.

One region, four different countries, several management similarities

We find **similar management scores in all four countries** (Bosnia & Herzegovina, Croatia, North Macedonia and Serbia) with slight advantage of North Macedonia in talent management. Our **results are robust** for different sub-samples, based on seniority of respondents, and for different survey methods.

Across individual industries management practices differ

Our results show **variation** in management scores **across industries**. Plants in computer and electronic industries are the best run and plants producing metal products have the lowest management practices scores.

Ownership type influences management practices

The findings also suggest that **ownership type matters** when it comes to management practices. Family and founder owned plants have slightly better total management scores than others, but this difference is much stronger when it comes to talent management practices.

Plants **owned by foreign multinational corporations (MNCs)** are significantly better run than domestic plants. Higher number of **written procedures and instructions from MNC HQ** how to run the plant are associated with **higher level of management practices**. This is **not the case with international business travelers** sent from MNC HQ, nor with **trainings** organized within HQ or other subsidiaries abroad.

External factors impact management practices

Finally, **similar external issues** prevent plants to improve their management practices in all 4 countries: **emigration and lack of qualified manual workers, grey economy, high payroll taxes, strict Labor law** and an **inefficient public sector**.

¹ Plants from **Albania and Montenegro** were not included in this study due to the low number of manufacturing plants with more than 50 employees for statistically relevant results (5 in Albania and 29 in Montenegro, from Orbis database accessed in March 2019).



Study Motivation

Why is the topic relevant?

There are **vast differences** in how well companies **execute** their **management practices**.

These differences matter a lot as firms with **strong managerial core practices** perform significantly **better** in terms of **productivity and profitability**.

Previous findings across a large number of countries (Bloom & Van Reenen, 2007; Bloom, Genakos, Sadun & Van Reenen, 2012a) show that:

- A **one-point increase** in management practices scores on a 5-point Likert-type scale was associated on average with
 - **+ 23% productivity**
 - **+ 14% market capitalization**
 - **+ 1,4 percentage points growth of annual sales**
- These results hold for all companies independent of sector, profitability, past productivity growth and size.

The additional **findings for transition countries** are also remarkable: an improvement in management practices scores **from the lower to the upper quartile** of their distribution is associated with an increase of about **9% in operating revenue**, an increase in the **profit margin by more than 85%** and an increase in the **return on total assets by almost 20%** (Bloom, Schweiger & Van Reenen, 2012b).

Thus, exploring core management practices is very impactful, hence raising the question: **Which factors influence or explain the level of management practices?**

Why Western Balkan countries?

Many MNCs have relocated crucial stages of their production to these countries, mainly due to their **cheap and relatively well-educated available workers**. Most **investors** are now **facing the challenge of improving management practices** and skills of their affiliates in this region.

In addition, firms from abroad, especially from **Austria and Germany**, continue to be heavily interested in investing into the region. **Multi-annual Action Plan (MAP) for a Regional Economic Area in the Western Balkans (WB)** was adopted in 2017 with the ultimate goal to improve the attractiveness of the region for foreign investments.

The region has to offer **around half a million companies for the potential future investment** (MAP, 2017). Despite these facts, firms lack detailed knowledge on where to invest and what to expect from local management practices.

This will **require substantial improvements in productivity** from these countries and part of this development **could arise as a result of better management practices**.

| | B&H | Croatia | N.Mace-donia | Serbia ² |
|------------------------------------|-------|---------|--------------|---------------------|
| Population (million) ¹ | 3,5 | 4,2 | 2,1 | 7,1 |
| GDP per capita (US\$) ¹ | 4 808 | 12 159 | 5 163 | 5 426 |

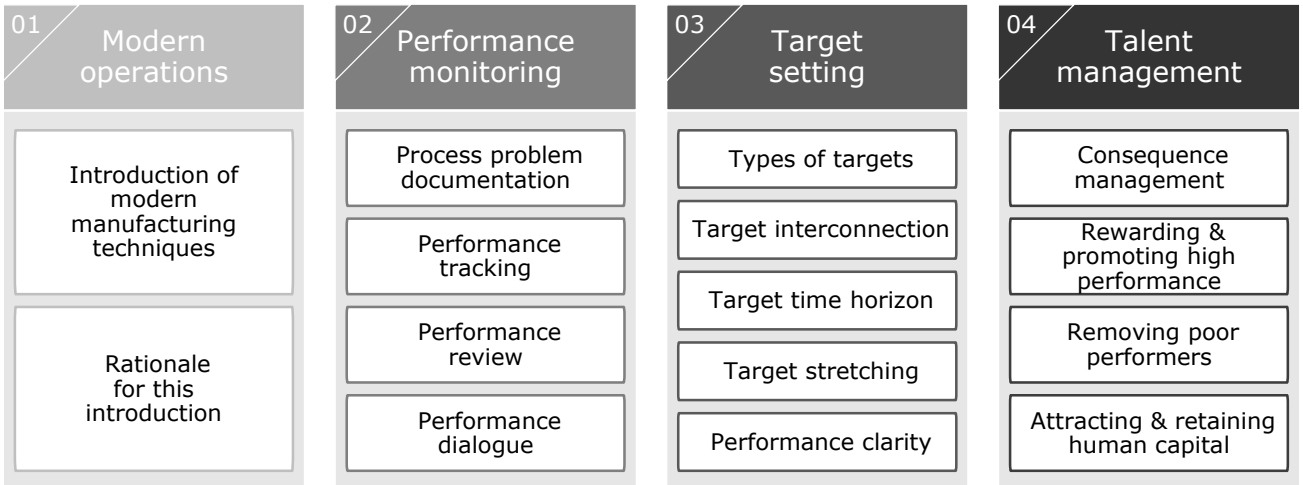
¹ United Nations Statistics Division, data for 2018

² Serbia was included in this study without Kosovo defined by the UN resolution 1244 and the population presented is also without Kosovo

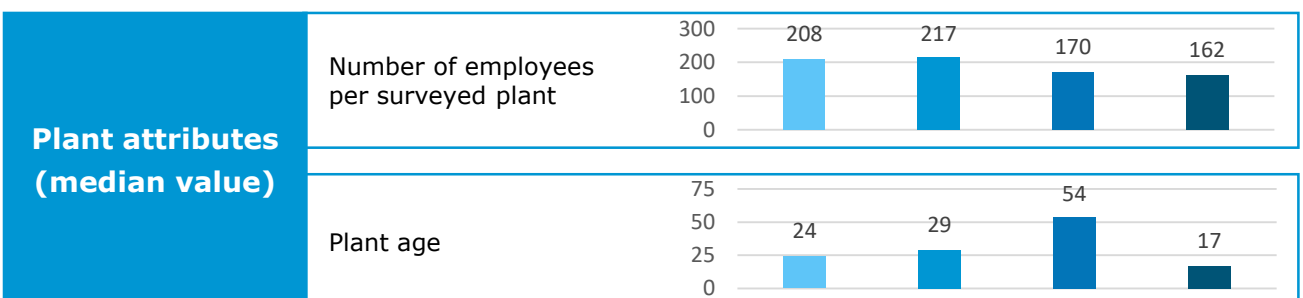
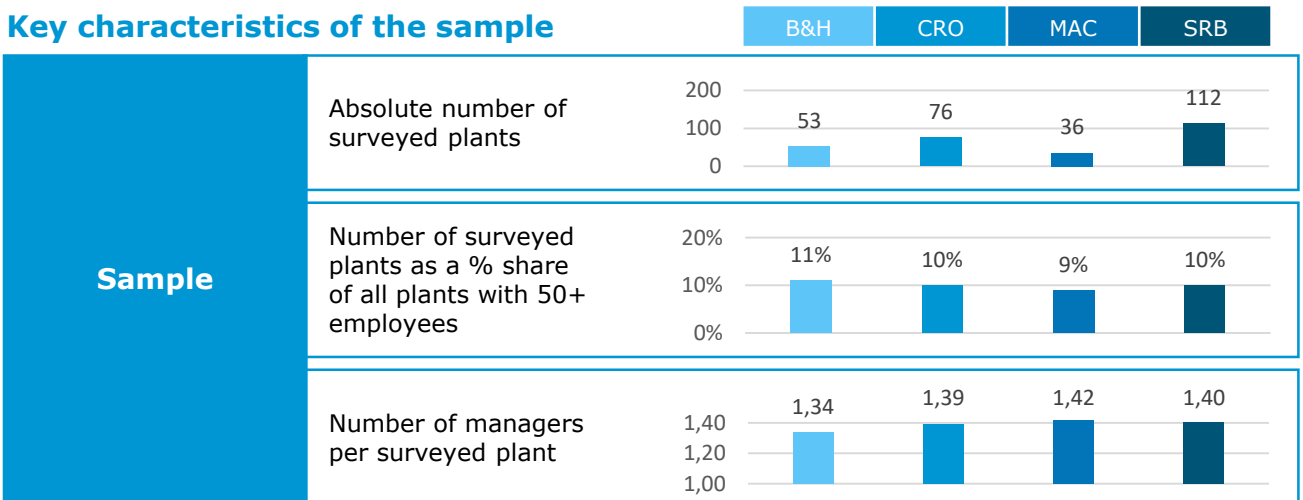
Study Design

- We surveyed **385 plant managers** from the region.
- We surveyed approximately **10% of manufacturing plants** with 50+ employees in each country (**277 plants** in total).
- We got additional answers of **second plant managers in 108 plants**.
- We **travelled to all 4 countries** and visited plants to recheck our data and obtain qualitative data to support our quantitative findings.
- We **personally interviewed managers in 28 plants** (10% of our surveyed sample).

Focus on 4 types of management practices, further divided into 18 subtopics¹



Key characteristics of the sample

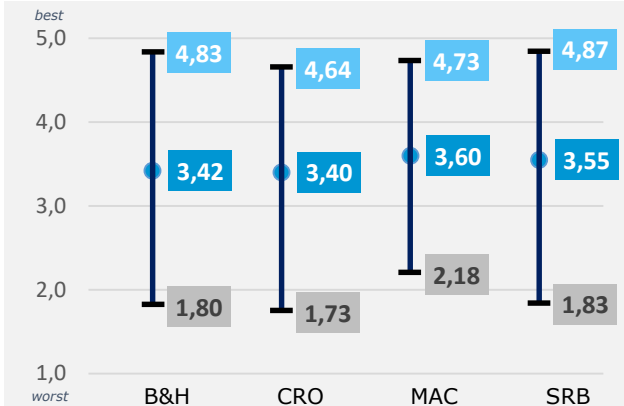


¹ Bloom & Van Reenen (2007)

Similarities and Differences

Cross-Country Similarities

Management practices are similar in all four countries



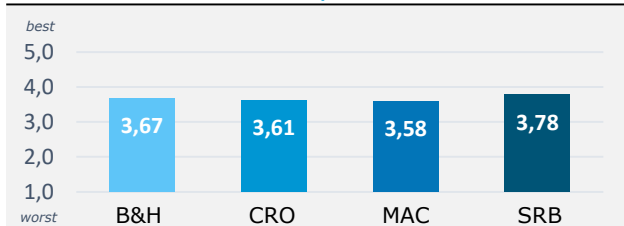
Maximum value of the total management scores show us that we have champions with extraordinary good management practices in each of these countries.

Average total management practices scores are similar in all four countries.

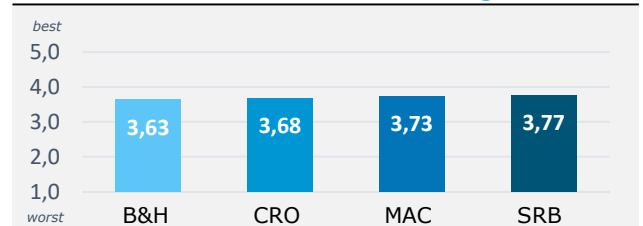
Minimum values show us that only in North Macedonia none of the plants that we examined had an average total score less than 2, which might affect its higher total average score.

Average scores are similar for all practices, and N. Macedonia is a talent leader

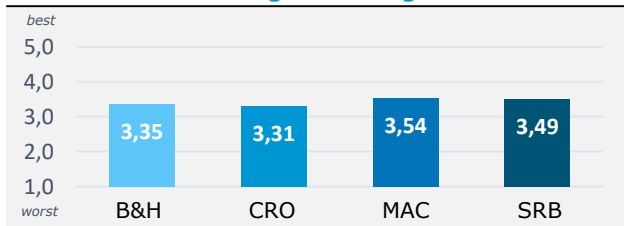
Modern operations



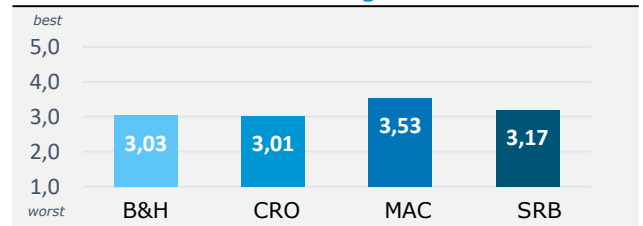
Performance monitoring



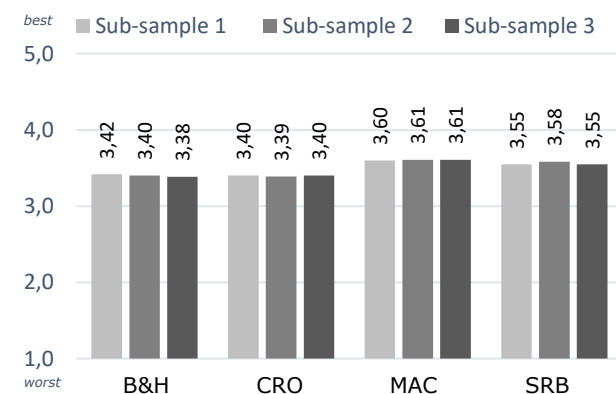
Target setting



Talent management



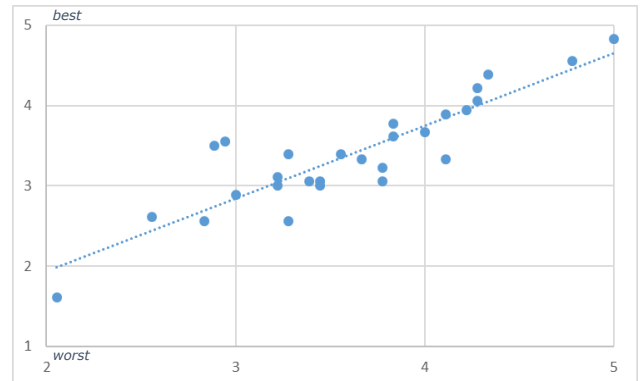
Our results are robust for different sub-samples and different survey methods



In **108 cases** where **2 managers from the same plant** completed a survey, we compared the final average scores using three sub-samples:

- 1 – answers of **less senior** managers
- 2 – **av.** answers of both managers
- 3 – answers of **more senior** managers

Results remain unchanged.



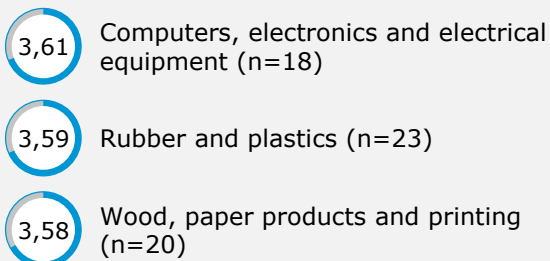
Correlation¹ between total scores based on interview data from 28 plants and survey scores is positive and high (**0.89** on a scale from 0 to 1). We additionally checked the validity of managers' answers by **visiting the production facility** in 24 plants and **investigating their processes**.

¹ Strength of the relationship between the relative movements of the answers of raters (range between -1.0 and 1.0)

Industry & Ownership Variations

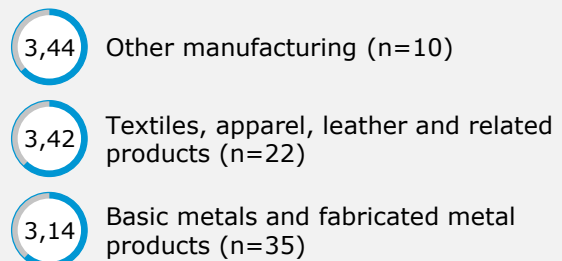
Significant variations in total management scores across industries exist

Top 3 industries



Plants in **computer and electronic** industries are the **best** run.

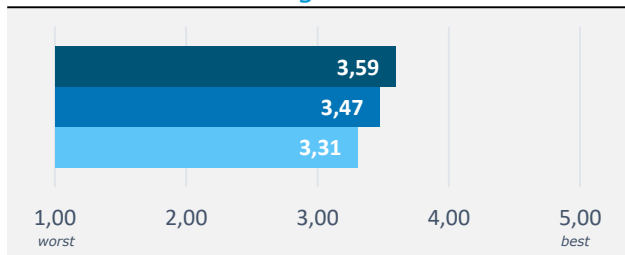
Worst 3 industries



Plants in **basic metals and metal products** industries are the **worst** run.

Family and founder owned plants have the best management practices

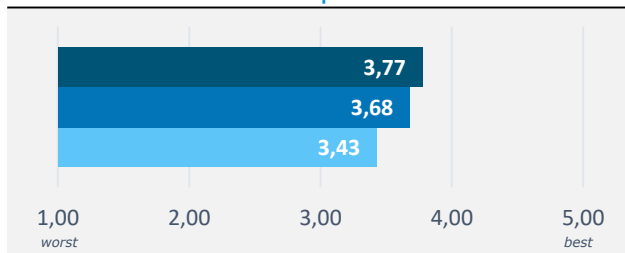
Total management scores



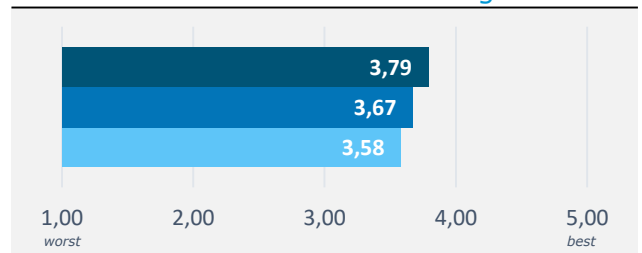
Legend:

- Family and founder ownership (n=125)
- Dispersed shareholders (3+) and owned by private individuals (n=128)
- Others (n=24)

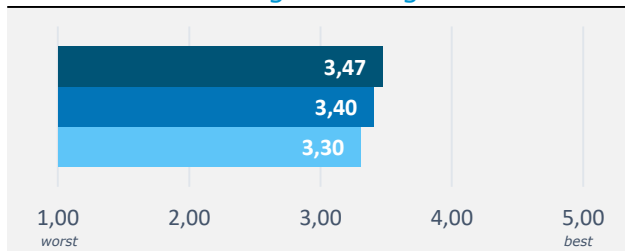
Modern operations



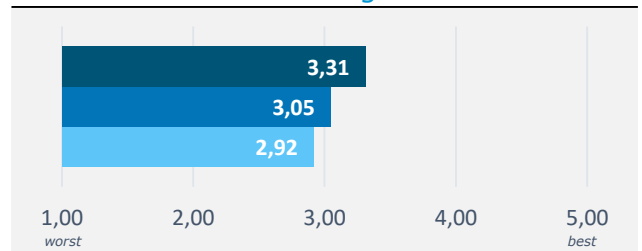
Performance monitoring



Target setting



Talent management

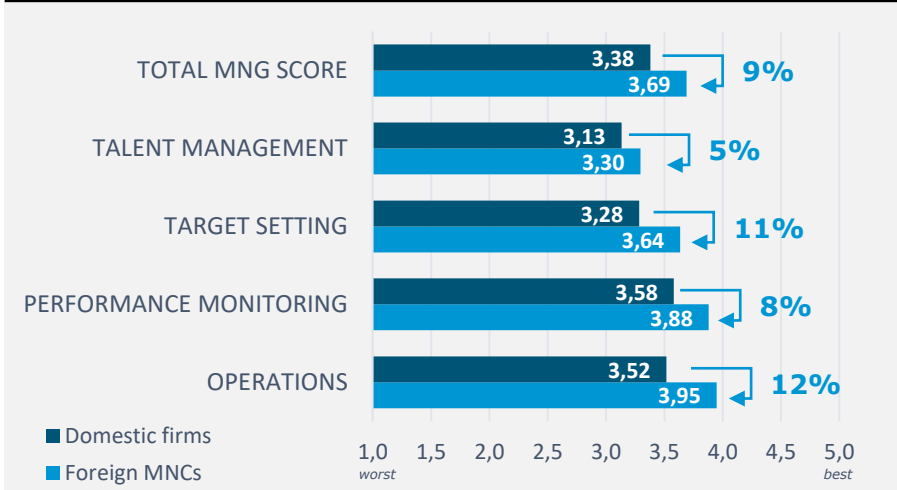


Family and founder owned plants have **slightly better** management scores compared to plants of other ownership types.

This leading position is, however, much **stronger** when it comes to **talent management** practices.

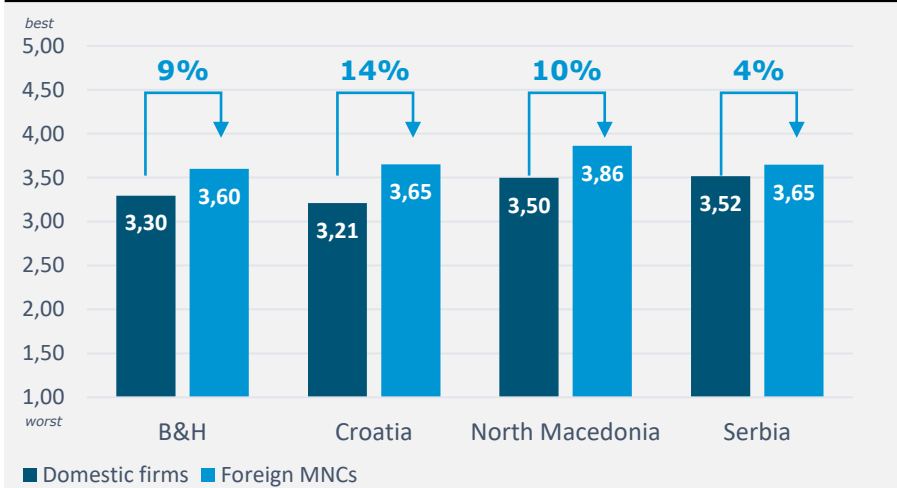
MNC Superiority

Plants owned by foreign MNCs are better run than domestic plants



MNC plants are **5% - 12%** better managed than domestic plants in **different types of management practices**.

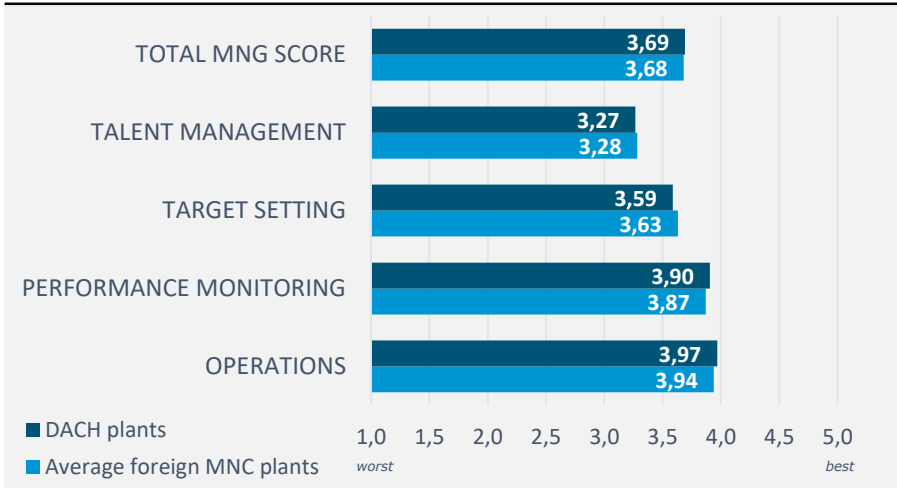
In all countries plants owned by foreign MNCs are better run than domestic firms



MNC plants are **4% - 14%** better managed than domestic plants in **different countries** of the region.

Our results are in line with previous findings from **33 countries around the world: MNCs outperformed domestic firms** (Bloom et al., 2012a).

MNC plants from the DACH¹ region have similar scores like MNC owned plants



Out of 129 MNC plants, 48 were from DACH region (12 Austrian, 29 Germany and 7 Switzerland).

DACH plants show **average MNC management scores**.

¹ Acronym used to represent the dominant states of the German language area – Germany (D for Deutschland), Austria (A) and Switzerland (CH for Confoederation Haelvetica)

Influence of MNC Resources

- Our preliminary regression results show that firms that are **owned by multinationals** have **higher management scores compared to domestic** plants. This range goes from 0.23 (talent management) to 0.4 (modern operations) on a 1 to 5 scale.
- Since our descriptive analysis and previously mentioned findings (Bloom et al., 2012a) suggest that the vast difference exists also among MNC plants, we raise the question:

Which MNC HQ resources significantly affect the level of management practices in their subsidiary plants?

01

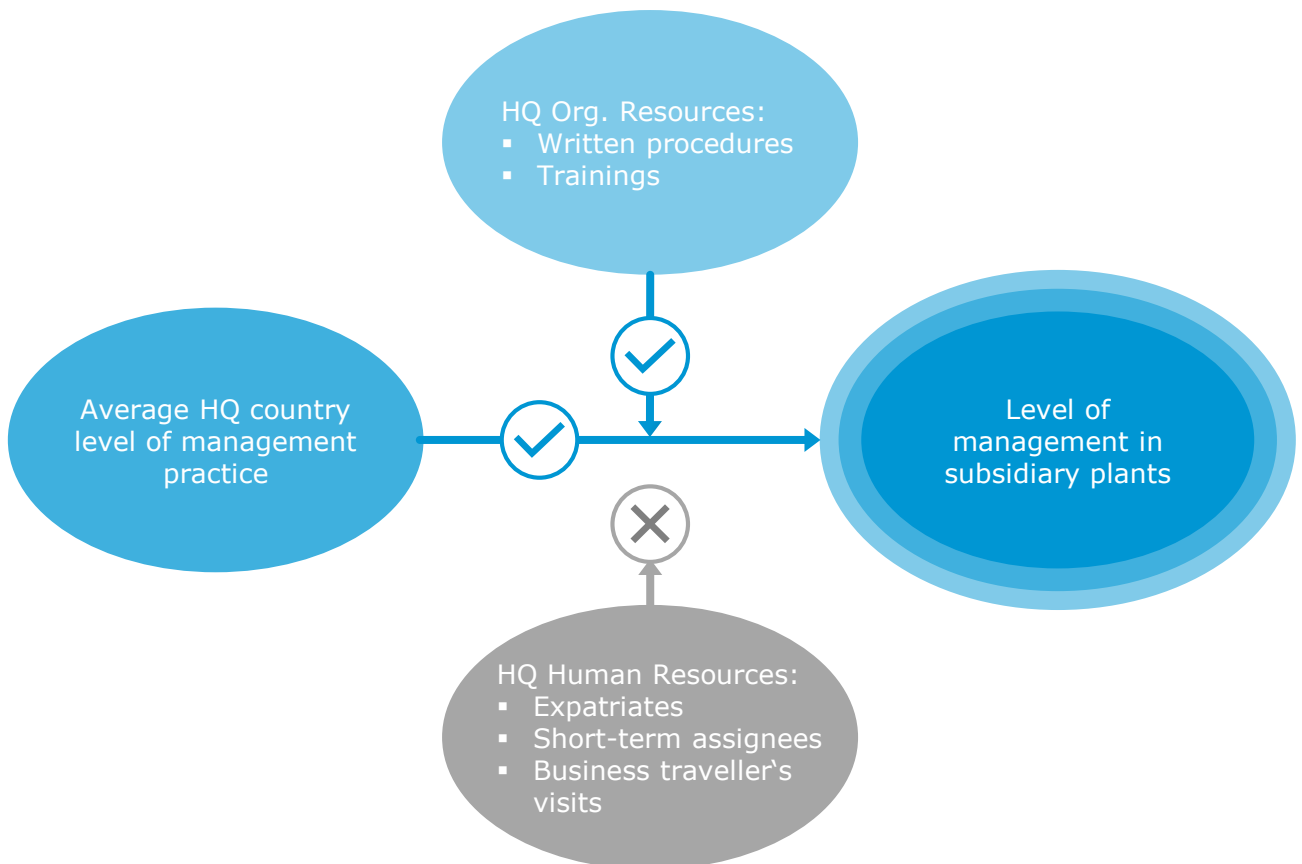
It **matters** in which business environment and which country the **HQ is located**. Average **HQ** country level of management practices is **positively associated** with the level of management **practices** in their **subsidiary plants**.

02

This **effect** is **even stronger** when the **HQ** provides **written procedures** and **trainings**¹ to subsidiary plants to help them implement the **best practices** from the HQ.

03

Contrary to our expectations, the number of **expatriates**, **short-term assignees**, and business travelers' **visits** from HQ do **not** have a **significant influence** on the level of management practices in subsidiary plants.



¹ On a scale: not at all / only a few are available / high number is available, but not in all fields / high number is available in all fields / all procedures in all fields are available

External Conditions

Bosnia & Herzegovina



Labor

- The manufacturing base is concentrated on **low-value-added products** with **low labor force participation**.
- Unfair **competition** is present in the **labor market** (e.g., employees are officially registered for working part-time, but they work full-time and get the rest of the salary in cash without paying taxes).
- People work abroad on a **black market**, while being officially registered as unemployed in B&H and getting unemployment benefits.



Government, institutions and politics

- Institutional, regulatory and ethnical **fragmentation** is affecting business processes.
- Persisting **political issues** with a highly **ethnically fragmented government** hinders efficient policymaking.
- **Lack of public investment** (transport, education, health) is especially present in rural areas.
- A large informal sector and a developed **grey economy** still remain a big challenge.
- Some companies can **avoid the law** if owners or members of the management board are highly involved in politics.



Taxes, contributions and benefits

- Too **high payroll taxes** put a big pressure on employers.
- Unfair **difference in maternity benefits** exists among cantons (e.g., flat amount of 200 EUR for Sarajevo, and 80% of net salary – approximately 250-350 EUR – for Zenica).



“Political support and connections are key for all business decisions and a way to avoid the official law. Ethnicity, unfortunately, still plays a big role in all segments of business and every-day life, even 25 years after the end of the war.”



Labor

- **Emigration** is taking away the highly-skilled workforce from the industry and coastal seasonal works are taking away manual employees.
- **Labor law is inflexible** (e.g., if a firm dismisses a full-time employee, they cannot hire a worker in the same position during the following 6 months).
- The **education system needs restructuring** in order to produce more qualified technicians, qualified manual workers and a better dual education system.
- More **state support is needed** in order to promote school profiles for manual work and dual education.



Government, institutions and politics

- Getting **permits** for the construction of plants and buildings is problematic and slow, too much **paperwork** is required, and final **decisions** are mainly **politically** driven.
- The **administration** and the **justice system** are **inefficient** (e.g., theft cases in firms have not been solved even after more than 10 years).



Taxes, contributions and benefits

- **Too high payroll taxes** put a big pressure on employers.



Other issues

- The whole economy is **vulnerable to the EU business cycle**.
- The management board of big companies **dismisses workers** as soon as the **crisis** arrive, and it takes afterwards at least 2 years to properly train new engineers.



“It is very difficult to find good workers. More permanent workers mainly went abroad and during the summer months young workers choose seasonal jobs on the coast and earn during summer what they would earn in our factory in a year.”

North Macedonia



Labor

- **Structural unemployment** is at a high level.
- **Employment law** is **problematic**, since Slovenian law was directly translated without adaptation to North Macedonian conditions.
- Cases of **unfair competition** are often **present among domestic plants** (e.g., holiday money of around 100 EUR required by law to be paid by employers is in case of many domestic firms paid on the account of employees, but then employees are asked to pay it back in cash).



Government, institutions and politics

- Conflictual **political** landscape with **tensions** between the **Slavic** majority and the **Albanian** minority are present in every-day life.
- A large **informal economy** still remains a big challenge.
- **Inadequate** transport **infrastructure** prevents investments in rural areas.



Taxes, contributions and benefits

- **Contributions** are **too high**, which restricts employers to pay higher bonuses.



“It is a public secret that many local companies pay the obligatory holiday money to employees on their accounts, but on the next Monday workers have to bring this money back in cash.”



Labor

- **Workers** are **overprotected** by Labor law – it is too difficult to fire an inefficient permanent employee.
- **Law** for **expats** and **foreign workers** is very **complicated**, which prevents HQ to send more international business travelers to their plants in Serbia.
- Too many discovered **“fake” sick leaves** urge for more control of doctors who hand out sick leave confirmations.
- **High emigration** of the experts and graduates significantly reduce the supply of qualified labor force.



Government, institutions and politics

- Unresolved **Kosovo conflict** affects production and exports to Kosovo.
- Massive **corruption**, an **inefficient public sector** and a large **informal economy** still remain a big challenge for Serbian government to be solved.
- The **waiting time** to build new plants or storage buildings for domestic companies is **too long**.
- Generous **state subsidies** and privileged conditions for **“strategically important”** foreign **firms** (chosen by the government) negatively affect domestic firms and smaller foreign investors.



Taxes, contributions and benefits

- **Too high taxes** for awards and bonuses prevent companies to reward employees more for their outstanding work.



Other issues

- Problems of **quality** and unstable **supply of raw materials** (e.g., raw milk, eggs and primary products) make a big problem for food producers.
- **Deficient infrastructure** (roads, railways) in the countryside prevent more investment in these areas.



“Local administration is just killing our business. We waited for almost a year to get an approval to build another factory building even though we had all the documents ready and found new workers to start their jobs.”

Final Conclusions

Key Takeaways



Plants in all four countries (Bosnia & Herzegovina, Croatia, North Macedonia and Serbia) are run at a **similar level of management practices**.



Plants in **tech industries** are the best run and the worst one are in the **metal industry**.



Family and founder owned plants have slightly better management scores compared to plants of all other ownership types. This leading position is, however, much stronger when it comes to talent management practices.



Foreign MNC plants are much better run than domestic plants.



Higher number of **written procedures and instructions** from HQ how to run a plant are associated with higher level of management practices. This is not the case with **international business travelers** sent from HQ, nor with **trainings** organized in HQ or other subsidiaries abroad.

Similar external conditions are preventing plants to improve their management practices



Labor

- Emigration taking away highly-skilled workforce
- Lack of qualified manual workers and modern education system
- Workers overprotected by Labor law



Government, institutions and politics

- Inefficient public sector and local government
- High bureaucracy
- Large informal economy and work in grey sector



Taxes, contributions and benefits

- Too high payroll taxes



Appendix



Questionnaire I/III

(1) Introduction of lean (modern) manufacturing techniques

What kind of lean (modern) manufacturing processes have been introduced at your plant (including just-in time (JIT) delivery from suppliers, automation, flexible manpower, support systems, attitudes, and behavior)?

A: Other than JIT delivery from suppliers few modern manufacturing techniques have been introduced (or have been introduced in an ad-hoc manner).

B: Between A and C

C: Some aspects of modern (lean) manufacturing techniques have been introduced, through informal/isolated change programs.

D: Between C and E

E: All major aspects of modern/lean manufacturing have been introduced (Just-in-time, automation, flexible manpower (number of hours or positions), support systems, attitudes and behavior) in a formal way.

(2) Rationale for introduction of lean (modern) manufacturing techniques

What factors led to the adaptation of these lean (modern) management practices?

A: Modern (lean) manufacturing techniques were introduced because others were using them.

B: Between A and C

C: Modern (lean) manufacturing techniques were introduced to reduce costs.

D: Between C and E

E: Modern (lean) manufacturing techniques were introduced to enable us to meet our business objectives (including costs).

(3) Process problem documentation

How do process problems typically get exposed and fixed?

A: No process improvements are made when problems occur.

B: Between A and C

C: Improvements are made in workshops involving all staff, to improve performance in their area of the plant.

D: Between C and E

E: Exposing problems in a structured way is integral to individuals' responsibilities and resolution occurs as a part of normal business processes rather than by extraordinary effort/teams.

(4) Performance tracking

What kind of indicators would you use for performance tracking?

A: Measures tracked do not indicate directly if overall business objectives are being met. Tracking is an ad-hoc process (certain processes aren't tracked at all).

B: Between A and C

C: Most key performance indicators are tracked formally; tracking is overseen by senior management.

D: Between C and E

E: Performance is continuously tracked and communicated, both formally and informally, to all staff using a range of visual management tools.

(5) Performance review

How do you review these performance indicators?

A: Performance is reviewed infrequently or in an un-meaningful way (e.g. only success or failure is noted).

B: Between A and C

C: Performance is reviewed periodically with both successes and failures identified; Results are communicated to senior management; No clear follow-up plan is adopted.

D: Between C and E

E: Performance is continually reviewed, based on indicators tracked; All aspects are followed up to ensure continuous improvement; Results are communicated to all staff.

(6) Performance dialogue

How are these performance review meetings structured?

A: The right data or information for a constructive discussion is often not present or conversations overly focus on data that is not meaningful; Clear agenda is not known, and purpose is not stated explicitly.

B: Between A and C

C: Review conversations are held with the appropriate data and information present; Objectives of meetings are clear to all participating and a clear agenda is present. Conversations do not, as a matter of course, drive to the root causes of the problems.

D: Between C and E

E: Regular review/performance conversations focus on problem solving and addressing root causes; Purpose, agenda and follow-up steps are clear to all. Meetings are an opportunity for constructive feedback and coaching.

Questionnaire II/III

(7) Consequence management

What would happen if agreed objectives/targets were not met?

- A: Failure to achieve agreed objectives does not carry any consequences.
- B: Between A and C
- C: Failure to achieve agreed results is tolerated for a period before action is taken.
- D: Between C and E
- E: A failure to achieve agreed targets drives retraining in identified areas of weakness or moving individuals to where their skills are appropriate.

(8) Types of Targets

What types of targets are set for the company?

- A: Goals are exclusively financial or operational.
- B: Between A and C
- C: Goals include non-financial targets, which form part of the performance appraisal of top management only (they are not reinforced throughout the rest of organization).
- D: Between C and E
- E: Goals are a balance of financial and non-financial targets; Senior managers believe the nonfinancial targets are often more inspiring and challenging than financials alone (e.g. 60% market by 2020).

(9) Target interconnection

What is the motivation behind your goals and how are they cascaded down to the individual workers?

- A: Goals are based purely on accounting figures (with no clear connection to shareholder value).
- B: Between A and C
- C: Corporate goals are based on shareholder value but are not clearly cascaded down to individuals.
- D: Between C and E
- E: Corporate goals focus on shareholder value. They increase in specificity as they cascade through business units ultimately defining individual performance expectations.

(10) Target time horizon

What kind of time scale are you looking at with your targets? Are your goals set independently of each other?

- A: Top management's main focus is on short term targets
- B: Between A and C
- C: There are short and long term goals for all levels of the organization. As they are set independently, they are not necessarily linked to each other.
- D: Between 3 and 5
- E: Long term goals are translated into specific short term targets so that short term targets become a "staircase" to reach long term goals.

(11) Target stretching

How tough are your targets? Do you feel pushed by them?

- A: Goals are either too easy or impossible to achieve; managers low-ball estimates to ensure easy goals.
- B: Between A and C
- C: In most areas, top management pushes for aggressive goals based on solid economic rationale. There are a few "sacred cows" that are not held to the same rigorous standard.
- D: Between C and E
- E: Goals are genuinely demanding for all divisions. They are grounded in solid, solid economic rationale.

(12) Clarity of goals and measures

If your staff were asked about individual targets, what would they say?

- A: Performance measures are complex and not clearly understood. Individual performance is not made public.
- B: Between A and C
- C: Performance measures are well defined and communicated; performance is public in all levels but comparisons are discouraged.
- D: Between C and E
- E: Performance measures are well defined, strongly communicated and reinforced at all reviews; performance and rankings are made public to induce competition.

Questionnaire III/III

(13) Installing a talent mindset

How do senior managers show that attracting and developing talent is a top priority in your company?

- A: Senior management do not communicate that attracting, retaining and developing talent throughout the organisation is a top priority.
- B: Between A and C
- C: Senior management believe and communicate that having top talent throughout the organisation is a key way to win.
- D: Between C and E
- E: Senior managers are evaluated and held accountable on the strength of the talent pool they actively build.

(14) Building a high performance culture

How does your appraisal/reward system work?

- A: People within our firm are rewarded equally irrespective of performance level.
- B: Between A and C
- C: Our company has an evaluation system for the awarding of performance related rewards.
- D: Between C and E
- E: We strive to outperform the competitors by providing ambitious stretch targets with clear performance related accountability and rewards.

(15) Making room for talent

If you had a poor performer as a worker, what would the company do?

- A: Poor performers are rarely removed from their positions.
- B: Between A and C
- C: Suspected poor performers stay in a position for a few years before action is taken.
- D: Between C and E
- E: We move poor performers out of the company or to less critical roles as soon as a weakness is identified.

(16) Developing talent

How would you identify and develop your star performers?

- A: People are promoted primarily upon the basis of tenure.
- B: Between A and C
- C: People are promoted upon the basis of performance.
- D: Between C and E
- E: We actively identify, develop and promote our top performers.

(17) Creating a distinctive employee value position

What makes it distinctive to work at your company as opposed to your competitors?

- A: Our competitors offer stronger reasons for talented people to join their companies.
- B: Between A and C
- C: Our value proposition to those joining our company is comparable to those offered by others in the sector.
- D: Between C and E
- E: We provide a unique value proposition above our competitors to encourage talented people to join our company above our competitors.

(18) Retaining human capital

If you had a star performer who wanted to leave what would the company do?

- A: We do little to try and keep our top talent.
- B: Between A and C
- C: We usually work hard to keep our top talent.
- D: Between C and E
- E: We do whatever it takes to retain our talent.



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