Group 1 - Research Questions

Master's in Business Analytics – Culminating Project
Week of: 2
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1. Can world development indicators be used to accurately predict mortality?
2. How has mortality rate and risk factors changed over time?
3. How does mortality rate and risk factors look amongst different countries?
4. What are the types of clusters that emerge when classifying countries using mortality data?
5. Does there exist any relationships between mortality and emissions, nutrition, birth, and poverty data?
6. How have emissions, nutrition, birth, and poverty data changed over time?
7. Which countries have a positive, constant, and negative rate of change for mortality and birth?
8. What are the most important factors to predict child mortality in developing countries?
9. What population factors can be used to predict mortality?
10. Can a forecasting model be built to predict mortality?
11. How do the different forecasting and prediction models differ between different country clusters?
12. Does there exist any relationships between certain causes of death and nutrition, emission, poverty, or environmental indicators?
13. What are the prevalent causes of death within each country or cluster of countries?
14. How do the prevalent causes of death within each cluster of countries change over time?
15. What are the trends of mortality risk factors when aggregated across the world? How about within each region/continent?
    How does government spending on education correlate with student performance across U.S. states?
16. What is the relationship between public education funding and student dropout rates across states?
17. What is the long-term impact of early childhood education enrollment and investment on high school graduation rates?
18. What is the relationship between teacher qualifications and student graduation rates?
19. What is the relationship between teacher salaries and student performance outcomes?
20. Does education inequality correlate with income inequality in the U.S.?
21. Can we predict state-level unemployment rates based on education attainment levels?
22. How do changes in state-level government education funding impact literacy rates over time?
23. How does the quality of school infrastructure correlate with student attendance rates?
24. Do states with higher education attainment levels have lower rates of poverty?
25. How has the U.S. government education spending (as a percentage of GDP) changed over the last 20 years?
26. How has unemployment among individuals with basic vs. advanced education changed over the past 20 years?

27. Can we predict student dropout rates based on government education spending trends?
28. How does education attainment correlate with public perception of corruption and trust in governmental institutions?
29. Does access to early childhood education impact long-term health outcomes?
30. Does nutrition education in schools reduce obesity rates among children and adolescents?
31. Are there any surprisingly disproportionate costs of foods (e.g. cost fruits, cost of vegetables)? Why is it surprising for that country?
32. Does a particular disproportionate food cost correlate with any indicators of mortality, education, or governance?
33. Does the transition from unhealthy to healthy diets predict changes in regulatory quality, educational attainment, or child mortality?
34. Does the cost of healthy food positively or negatively affect graduate education attainment? (Is it that same effect on males and females?)
35. Does the ratio of the cost of animal-source foods to vegetables and fruits predict average life expectancy?
36. Are there any interesting trends in cost share over the years?
37. Does cost share correlate with education expenditure?
38. Do any of the costs of foods relative to the starchy staples in a least-cost healthy diet correlate to any ratios in education, such as percent of women with Doctoral degrees?
39. Do any of the affordability indicators correlate or contradict with government expenditure on education?
40. Does the amount of people with food insecurity predict or influence the level of government effectiveness? What about food costs?
41. Does an increase in food insecurity over time induce or predict political instability?
42. Does affordability and the various ratios of cost to food expenditures predict or contradict any indicators of mortality?
43. Does food insecurity consistently lead to similar mortality rates across countries?
44. Is there a particular food that seems to dampen mortality rates?
45. Is it possible to quantify the interplay between healthy food, healthy government, educational attainment, and low mortality?
46. How does cost share affect mortality rates of each age grouping?
47. Is food insecurity mitigated by educational attainment? By a particular level of education?
48. Do drastic changes in food costs from year to year induce any noticeable effects on education, governance, or mortality? (In what way? How much lag is there?)
49. Does food insecurity predict or adversely affect regulatory quality? (or vice versa?)
50. Does food insecurity predict or adversely affect the suicide rate? (or vice versa?)
51. How will political stability change in the USA over the next decade based on past data?
52. How has the Control of Corruption score in the USA changed from 1996 to 2023?
53. What is the relationship between Control of Corruption and Government Effectiveness in the USA?
54. How have Voice & Accountability scores evolved over the years?
55. Can we predict the Control of Corruption score in 2026 based on past trends?

56. What is the trend in Government Effectiveness estimates in the USA from 1996 to 2023?
57. Can an increase in Government Effectiveness predict improvements in Rule of Law?
58. Based on the trend from 1996 to 2023, what is the predicted Rule of Law estimate for the USA in 2026?
59. What is the predicted Voice and Accountability estimate for the USA in 2025?
60. Does higher Government Effectiveness correlate with lower infant mortality rates?
61. Is there a correlation between Rule of Law and life expectancy?
62. How does Political Stability influence health outcomes and mortality trends?
63. Can improvements in Regulatory Quality predict reductions in non-communicable disease mortality?
64. Does better Control of Corruption lead to lower child mortality rates over time?
65. How does Government Effectiveness correlate with primary and secondary school enrollment rates?
66. Does Voice and Accountability impact access to quality education and literacy rates?
67. Is there a relationship between Political Stability and higher education attainment?
68. How does Regulatory Quality affect public investment in education infrastructure?
69. Can changes in Control of Corruption predict improvements in education outcomes?
70. How does Political Stability influence food price volatility and access to nutrition?
71. Does Regulatory Quality impact food security and affordability?
72. What is the relationship between Rule of Law and malnutrition rates?
73. How does Control of Corruption affect government subsidies for food and agricultural policies?
74. Can an increase in Government Effectiveness lead to a reduction in hunger and undernutrition?
75. How do Government Effectiveness and Political Stability correlate across different high-income countries?
76. How does the Control of Corruption score in the USA compare to other OECD countries over time?
77. How does the Rule of Law in the OECD countries compare with emerging economies like India and Brazil?
78. Do countries with higher Regulatory Quality tend to have lower food price volatility?
79. How does the Rule of Law score compare between democratic and authoritarian regimes, and how has this changed over time?
80. How does Control of Corruption influence public health outcomes across regions with different healthcare systems?
81. How have global Control of Corruption trends evolved from 1996 to 2023?