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Dear Sir or Madam,

Thank you very much for your support of my dissertation at the “International Fuel Ethanol Workshop & Expo” in Minneapolis, Minnesota (2012). You have been a great source of help for me by filling out the questionnaire designed to identify the essential factors that will influence the Ethanol Market of the USA until 2023.

My name is Tillmann Anschütz and as a graduate student at the University of Göttingen, Germany, I am currently working on my doctoral thesis on the subject of „Ethanol Markets in the EU and in the USA in the Year 2023“.

On the following pages, I will present to you the results of the survey which are reliable since 85 experts of the US-American Ethanol Market participated.

- On the following pages, the factors are listed by their “Mean” in descending order. Thus, the first factor in the tablet is the factor with the strongest influence on the US-American Ethanol Market till 2023.
- In the document “Overview_USA” (in the attachment of the email), you will find an overview of all 31 factors. The strength of influence of each factor can be seen in the field “Mean”. The higher the value, the stronger the influence of the factor on the Ethanol Market.

Please let me thank you once again for your time and your support of my dissertation. It would be of tremendous help to me if I could contact you again in the next steps of the process in which I will develop the scenarios for the US-American Ethanol Market.

If you have got any questions or want more information on any particular issue, please feel free to contact me.

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In case, the results for the EU Ethanol Market are of interest to you, please contact me and I will be glad to send them to you.

Sincerely yours

Tillmann Anschütz

Factor		N	Mean	Standard deviation	Sector
26	The legally permitted maximum ethanol blends to gasoline as regulated by the US Environmental Protection Agency	76	6,11	1,053	Politics
24	US-American ethanol consumption mandates (Renewable Fuel Standard 2)	78	6,08	1,078	Politics
1	Gasoline demand in the USA	85	5,61	1,235	Economics
14	Feedstock costs for corn ethanol in the USA	76	5,57	1,215	Economics
8	US-American end consumer distribution infrastructure for intermediate (E15-E40) ethanol blends	84	5,54	1,197	Economics
2	Crude oil price in the USA	85	5,44	1,017	Economics
17	Number of conventional gasoline vehicles in the USA able to run on intermediate (E15 - E40) ethanol blends	84	5,37	1,278	Technology
30	Debate in the USA about the effects of ethanol on the US-American energy independence	84	5,15	1,135	Society
31	Discussion in the USA about the effects of ethanol on the US-American economy	83	5,07	1,218	Society
9	US-American end consumer distribution infrastructure for high (E85) ethanol blends	77	5,06	1,341	Economics
25	US-American GHG reduction specifications for ethanol (Renewable Fuel Standard 2)	72	5,03	1,289	Politics
19	Enzymes technology for cellulosic ethanol	80	4,98	1,441	Technology
13	Production costs for cellulosic ethanol in the USA - without feedstock costs	73	4,96	1,695	Economics
15	Feedstock costs for cellulosic ethanol in the USA	74	4,93	1,547	Economics

1	2	3	4	5	6	7
very weak influence	weak influence	rather weak influence	moderate influence	rather strong influence	strong influence	very strong influence

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Factor		N	Mean	Standard deviation	Sector
16	Number of Flexible Fuel Vehicles in the USA	84	4,92	1,407	Technology
12	Production costs for corn ethanol in the USA - without feedstock costs	76	4,79	1,482	Economics
7	US-America ethanol transport infrastructure from the production sites to the ethanol markets at the east and west coast	83	4,78	1,316	Economics
27	Low Carbon Fuel Standard set by the State of California	74	4,39	1,363	Politics
11	Vertical strategic partnerships between companies in the ethanol market of the USA	76	4,37	1,198	Economics
23	Biobutanol capable of substituting fuel ethanol in the USA	73	4,25	1,588	Technology
10	Market price for DDGS (Dried Distillers Grains and Solubles) in the USA	74	4,24	1,412	Economics
20	GHG balance of corn ethanol produced in the USA	76	4,21	1,379	Technology
4	Ethanol exports from the USA to Brazil	84	4,15	1,393	Economics
5	Ethanol exports from the USA to the EU	84	4,13	1,24	Economics
29	Discussion in the USA about the effects of ethanol on the environment	85	4,12	1,375	Society
3	Ethanol imports from Brazil into the USA	84	4,08	1,328	Economics
21	GHG balance of cellulosic ethanol produced in the USA	74	4,05	1,423	Technology
28	Food vs. Fuel Discussion in the USA	85	4,02	1,309	Society
22	Biomass to Liquid (BtL) capable of substituting fuel ethanol in the USA	74	3,91	1,491	Technology
6	Ethanol exports from the USA to markets abroad - excluding the Brazilian and the EU ethanol market	83	3,66	1,417	Economics
18	Number of Electric Drive Vehicles in the USA	84	2,82	1,364	Technology

1	2	3	4	5	6	7
very weak influence	weak influence	rather weak influence	moderate influence	rather strong influence	strong influence	very strong influence

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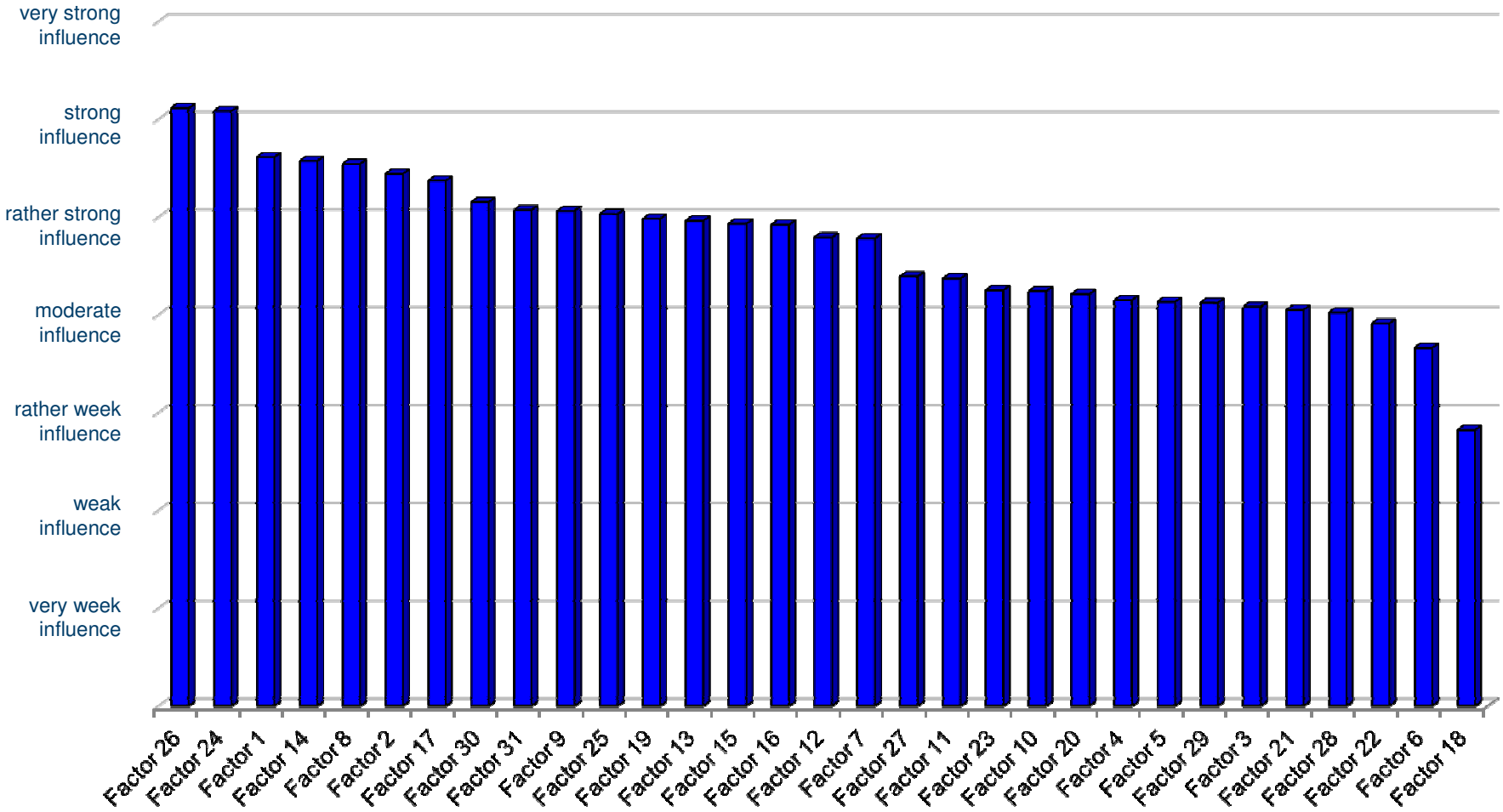
Comparison of the means of the Factors



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Main Results:

- The political factors “The legally permitted maximum ethanol blends to gasoline as regulated by the US Environmental Protection Agency” and “US-American ethanol consumption mandates (Renewable Fuel Standard 2)” are the factors with the strongest influence on the US-American Ethanol Market.
- Political GHG Regulations (“Low Carbon Fuel Standard set by the State of California” and “US-American GHG reduction specifications for ethanol (Reneable Fuel Standard 2)”) have a significantly weaker influence on the Ethanol Market than the political factors named in the point above.
- The factors “Gasoline demand in the USA” and “Crude oil price in the USA” have a “strong influence” and a “rather strong influence” on the market. They belong to those six factors that have the strongest influence on the Ethanol Market.
- Intermediate ethanol blends (E15 – E40) for conventional gasoline vehicles (Factor 8 and Factor 17) have a significantly stronger influence on the market than high ethanol blends (E85) (Factor 9 and Factor 16).
- Factors concerning the environment (“GHG balance of corn ethanol produced in the USA”, “GHG balance of cellulosic ethanol produced in the USA” and “Discussion in the USA about the effects of ethanol on the environment”) only have a “moderate influence” on the US-American Ethanol Market.
- The US-American export market for ethanol (“Ethanol exports from the USA to Brazil”, “Ethanol exports from the USA to the EU” and “Ethanol exports from the USA to markets abroad – excluding the Brazilian and the EU ethanol market”) does not have a strong influence on the market.
- The Factor “Food vs. Fuel Discussion in the USA” only has a moderate influence on the market. A significantly stronger influence on the market have got the societal factors “Debate in the USA about the effects of ethanol on the US-American energy independence”, and “Discussion in the USA about the effects of ethanol on the US-American energy independence”.
- Biomass to Liquid (BtL) and Biobutanol – both Drop-in fuels and capable of substituting ethanol – just have a “moderate influence” on the market.
- The factor “Number of Electric Drive Vehicles in the USA” is the factor with the weakest influence on the Ethanol Market.